GREAT EXPLOR-ERS.

County Borough of Northampton.

EDUCATION COMMITTEE.

Stimpson Avenue Evening School.

For the Session ended 28th March, 1907.

Awarded to H. C. Ray.

Citizenship

F. J. Langley *Head Teacher.*

"Columbus maintained a constant and anxious watch."

GREAT EXPLORERS

MARCO POLO, FERDINAND MAGELLAN, MUNGO PARK,
SIR JOHN FRANKLIN, DAVID LIVINGSTONE,
CHRISTOPHER COLUMBUS,
ETC., ETC.

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GREAT EXPLORERS.

MARCO POLO.

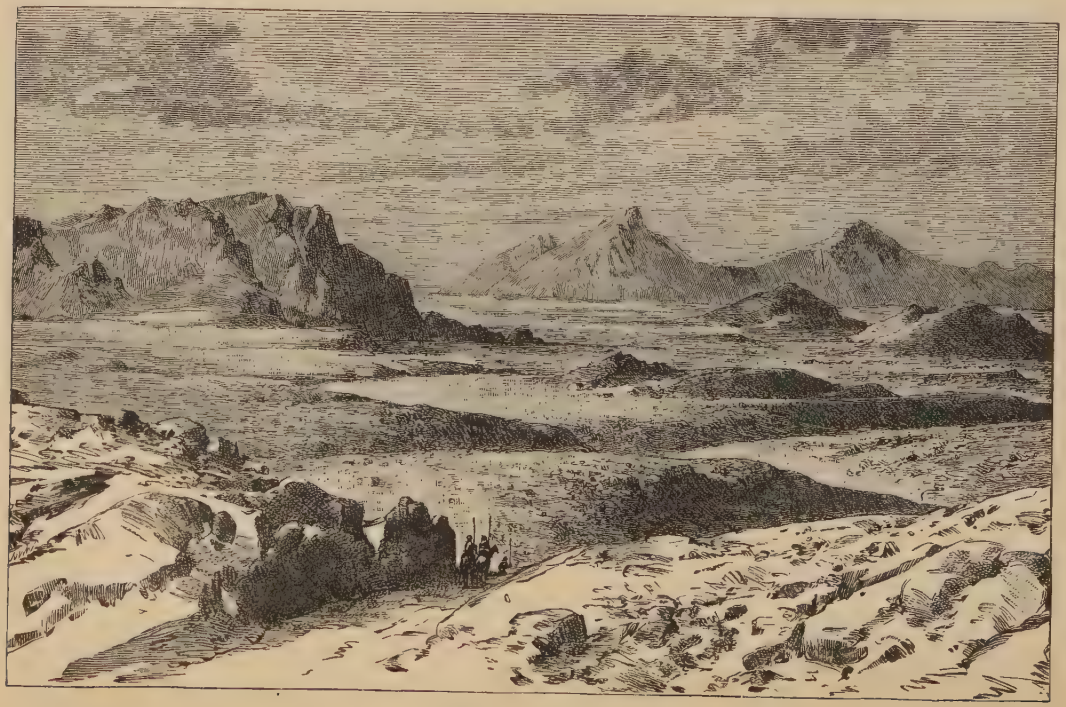
SIX hundred years ago there reigned in Cathay a powerful Tartar monarch called Kublai Khan. Dwelling at his court was a young native of Venice, whom Kublai held in the closest friendship, and whom he honoured above all his own nobles and people. This young Venetian was Marco Polo.

In the year 1260 two brothers, named Nicolo and Maffio Polo, sailed from Venice on a trading voyage to the East. After an adventurous journey of five and a half years, during which they wandered through many unknown lands, they finally reached Cathay, as China was called long ago. Here they were received kindly and joyfully by the great Kublai, who had never before seen a European. He asked them to be the bearers of a message to the Pope, the lord of the Christians, and to bring back his answer. This the brothers gladly undertook to do; and, loaded with honours, they set

out on their return journey, which lasted more than three years, having been absent altogether about ten years. It must be remembered that in those days there were no roads, and the way led through totally unknown countries. They were delayed, too, by wars between Asiatic chiefs, and at one city on their journey to Cathay they were detained by this cause for three years.

After an interval of nearly two years, the brothers again set out in 1271 on their return to Kublai. They were furnished with letters and gifts from the Pope, and they also took with them young Marco, the son of Nicolo, then about fifteen years old. It is from this young Marco that we have an account of the strange and wonderful lands seen and heard of. He was the first European, except his father and uncle, who had penetrated into these unknown countries.

Starting from Acre, the travellers first made their way through Asia Minor and Persia to the shores of the Persian Gulf, from which they probably intended to go to Cathay by sea; but, some obstacle interfering, they returned northwards through Persia. Travelling through Khorasan, they went on to Balkh and Badakhshan, where they were long delayed by the illness of young Marco, brought on, doubtless, by the unwonted fatigue of such a journey. They then climbed up to the plateau of the Pamirs, and it is noteworthy that this remarkable region was never again revisited or described until 1838. The travellers now descended into the part of Mongolia called Kashgar, a region which has since remained totally unknown to us



DESERT OF GOBI.

until within the last thirty years. Traversing this, they reached the Lake of Lob, and prepared to advance into the great desert of Gobi, across which their road lay. Marco relates the most ridiculous stories of evil spirits which haunted this desert, and which took a delight in leading travellers astray, so that they might lose their way and perish miserably of hunger. Notwithstanding these terrors and many real dangers, they passed safely over it in thirty days, and reached the country of the Grand Khan. The journey, on the whole, may be said to have been prosperous, although it occupied three and a half years.

The Polos finally arrived at a city called Shangtu, where Kublai was then holding his court. When the khan heard of their return he rejoiced exceedingly, and received them with great honour. He inquired who the young man was who accompanied the brothers, and on learning that he was Nicolo's son, he exclaimed, "He is welcome. I am much pleased with him."

Marco relates the history of Kublai Khan at some length, but it will be necessary only to say a few words on the subject. Some years before the Polos first arrived in China, the Eastern Tartars had grown very troublesome to the then independent State of China. The Chinese asked the Monguls to help them in suppressing the Tartars, which they very gladly undertook to do. These Monguls, having obtained a footing in China, proved so powerful that they quickly supplanted the Chinese as the ruling power, and founded a Mongul Tartar dynasty, of which Kublai Khan was the first mon-

arch. He was a powerful and sagacious prince, fond of war and conquest, and in time was acknowledged as the head of all the Mongul, Tartar, and Chinese states of Asia. He built, or rather extended, the city of Pekin, which he made his capital. Besides the city, he also built the famous and wonderful palace which has excited the amazement of travellers of all ages. The outer walls of the palace, Marco says, formed a square, each side being eight miles in length. But indeed it was more than a palace: it was a fortress and a city, in which the monarch could remain secure in times of popular commotion. Marco also gives an account of the principal cities and provinces of China, and the manners and customs of the people. On the whole, his account shows that that country has changed very little, if it has really changed at all, since his time six hundred years ago. Marco, like most people in the Middle Ages, had a firm belief in sorcery and witchcraft, and his narrative teems with accounts of wonderful things done by the wizards and priests. These wonderful things, of course, were mere tricks of the pagan priests, for the purpose of imposing on the ignorant natives, so that money and gifts might be extorted to keep them in luxury and idleness. One wonderful thing, which Marco saw himself, happened at the festival held on the birthday of the Grand Khan. Three vessels filled with wine stood on a table some distance from the khan. At a given signal these vessels left the table and placed themselves in the khan's hand, one after another. After he had drunk, the vessels returned of their own accord to

CHINESE AND TARTAR COSTUMES.

their places; but the guests were at such a distance that they did not see the wires upon which the vessels moved, and Marco himself believed that the vessels were moved by supernatural agency. Many other strange things were observed by him. He mentions a curious black stone which the natives burned instead of wood; this was, of course, coal, then unknown in Europe. He tells of the post system, also unknown in Europe, which had attained an extraordinary degree of efficiency in the khan's dominions. "It is indeed so wonderful a system," he says, "and so effective in its operation, as it is scarcely possible to describe." Perhaps more remarkable than the things he does mention are the things he does not. He does not mention the Great Wall of China, the art of printing, or gunpowder, although it is scarcely to be doubted that all these things were in existence in his time.

Marco soon made himself a favourite with the Grand Khan. He learned the Tartar and four other languages, and could both speak and write them well. He also adopted all the Tartar manners and customs, and became exceedingly sensible and sagacious. When the khan observed him display so much worth and prudence, he determined to employ him in his service. Marco was accordingly sent on an important mission to the distant provinces of Yunnan and Burmah, the journey to which took him six months. He accomplished his embassy with so much wisdom and prudence, and gave such a sensible account of the countries through which he passed, that the khan was delighted, and told him, if he lived, he would become an eminent

man. The khan, therefore, employed Marco in confidential missions to every part of the empire, and it was Marco's custom to give the khan an account of the different countries and peoples through which his journeys lay.

The Polos were able, shortly after their arrival at the court of Kublai, to give him important aid in the taking of a city which he had been besieging for two years without success. They proposed to construct machines, such as were used in Europe, capable of throwing stones of three hundred pounds weight, by which the buildings and walls of the city might be destroyed. The khan warmly approved of the scheme, and set all his most skilled artisans to work, under the direction of the Polos, to make these machines. When set up in front of the city the first stone projected from one of them fell with such force upon a building that a great part of it was crushed and fell to the ground. So terrified were the inhabitants by this mischief, which to them seemed to be the effect of a thunderbolt from heaven, that they immediately surrendered. This prompt result of their ingenuity increased the reputation of the Polos in the opinion of the Grand Khan and all his courtiers.

Marco rose rapidly in favour with the khan, and was employed in the administration of the country as well as on distant missions. He was made a member of the imperial council, and on one occasion was appointed governor of the important city of Yang-cheu, which post he held for three years. He visited the city of Karakorum, on the north of the Gobi desert, which had been the former

capital of the Great Khans. Another mission took him to Cochin-China; and he even went, on another occasion, as far as Southern India.

The Polos had now been many years at the court of Kublai Khan, and in that time had realized considerable wealth. Gradually a desire to revisit their native country grew upon them, and this feeling was strengthened by the great age of the Grand Khan, who was probably at this time about seventy-five years old. They knew that if they were in the country when he died, their situation might become dangerous, as they entirely depended on his favour. Nicolo Polo accordingly took the opportunity one day, when the khan was in an unusually good humour, of throwing himself at his feet, and asking permission for himself and his family to depart. The khan, so far from agreeing, appeared hurt at the suggestion. He asked what motive they could have for wishing to expose themselves to all the hazards of a journey, in which they might probably lose their lives. If gain, he said, was their object, he was ready to give them the double of whatever they possessed, and to gratify them with honours to the extent of their desires; but, from the regard he bore to them, he must positively refuse their petition. It will thus be seen how great was the regard and friendship in which Kublai held the Polos. Although at that time the khan refused his permission, they were soon able to return in an unexpected manner.

It happened about this time that an embassy arrived from Arghun Khan, sovereign of Persia, at the court of Kublai, to desire of him a lady of his

family in marriage. Kublai took the application in good part, and his choice fell upon a young maiden of seventeen, named Cocachin, who was extremely handsome. The ambassadors were greatly pleased with the khan's choice, and, receiving a gracious dismissal, set out on their return, accompanied by the princess, by the way they had come. Having travelled for eight months, they found their progress stopped by wars which had broken out among some Tartar princes, and they were obliged, therefore, to return to the court of Kublai. Just at this time, Marco Polo also returned from his voyage to India. When Arghun's messengers heard of his arrival, they asked him to guide them back to their own country by sea, as they had heard he was well acquainted with the navigation of the Indian seas. This Marco gladly agreed to do, as the family might thus have the opportunity of returning to Europe. The ambassadors, therefore, sought an audience of the Grand Khan to obtain his permission. Kublai was exceedingly displeased with the proposal, as he did not wish to part with the Venetians; but feeling that he must consent, he at last reluctantly yielded. He sent for the Polos, and addressed them with much kindness and condescension, assuring them of his regard, and requiring of them a promise that when they should have resided some time in their own country, they should return to him once more. At last, in the spring of 1292, all was ready for departure. The ambassadors, the young queen, the Polos, and all the attendants, embarked in fourteen ships, and sailed from the port of Chwan-chow in

Fokien. Kublai Khan took an affectionate and sorrowful leave of the Venetians, who had served him and had been his faithful friends for seventeen years. He must have had some apprehension that he would never see them again, for he was old; and as a token of his regard, he presented them with many rubies and other handsome jewels of great value.

The course of the voyagers took them along the coast of Cochin-China and through the Strait of Malacca, where they were detained at the island of Sumatra for five months, waiting for the trade wind. Crossing the Bay of Bengal, they next visited Ceylon, and sailed up the western coast of India. They at last reached their destination, which is supposed to have been the port of Ormuz, in the Persian Gulf, the whole voyage having occupied eighteen months. Having conducted the embassy and the young queen in safety to Persia, the Polos rested for nine months at the court of the king of that country. They had taken such care of the Princess Cocachin, and had befriended her in so many ways, that she shed tears on taking leave of them, when they left the court to proceed on their journey. Shortly after starting they heard of the death of their benefactor and patron, the Grand Khan Kublai, which entirely put an end to all thoughts of revisiting these regions. The travellers arrived in Venice in the year 1295, after an absence of twenty-four years.

Upon the arrival of the Polos in Venice, so changed were they in appearance that their nearest relatives did not recognize them. They seemed to

have acquired something of the Tartar both in countenance and speech. It was with the utmost difficulty they could convince their relatives of their identity, and gain admittance into their own house. They took a singular mode of making themselves generally known to all their connections, and impressing the city of Venice with an adequate idea of their importance. They prepared a magnificent entertainment, to which all their numerous relations were invited. When the guests had arrived, the Polos came forth clothed in long robes of crimson satin, such as it was customary to wear upon occasions of ceremony. When the guests had taken their places at table, the travellers stripped themselves of these robes, and put on similar dresses of crimson damask. When the first course had been removed, they put on robes of crimson velvet. At the close of the feast, the hosts appeared in plain satin suits, resembling such as were worn by the rest of the company. All were astonished at what they saw, and curious to know what was to follow. When the cloth had been removed, Marco rose from table, went into an adjoining room, and presently returned with the three coarse thread-bare garments in which they had first made their appearance in Venice. The seams of these were ripped open, and the linings and patches stripped off, when there was brought to light a vast quantity of the most costly jewels, of immense value, which had been sewn into the garments with such skill that it could not be suspected they contained such treasures. This display of wealth, which lay exposed upon the table before them, appeared so miraculous that the

spectators remained motionless with amazement. Upon recovering themselves, they could no longer doubt the strange story or the identity of the Polos, and they accordingly exhibited every mark of profound respect for their hosts.

The story of this strange scene quickly spread through the city, and great numbers of the inhabitants, from the nobles down to the mechanics, hastened to the house of the Polos to congratulate them on their return and testify their good will. The Polos soon acquired posts of honour in Venice; and Marco, who never undertook to travel again, served his native city long and faithfully. He died, honoured and regretted, about the year 1324, at the advanced age of seventy years.

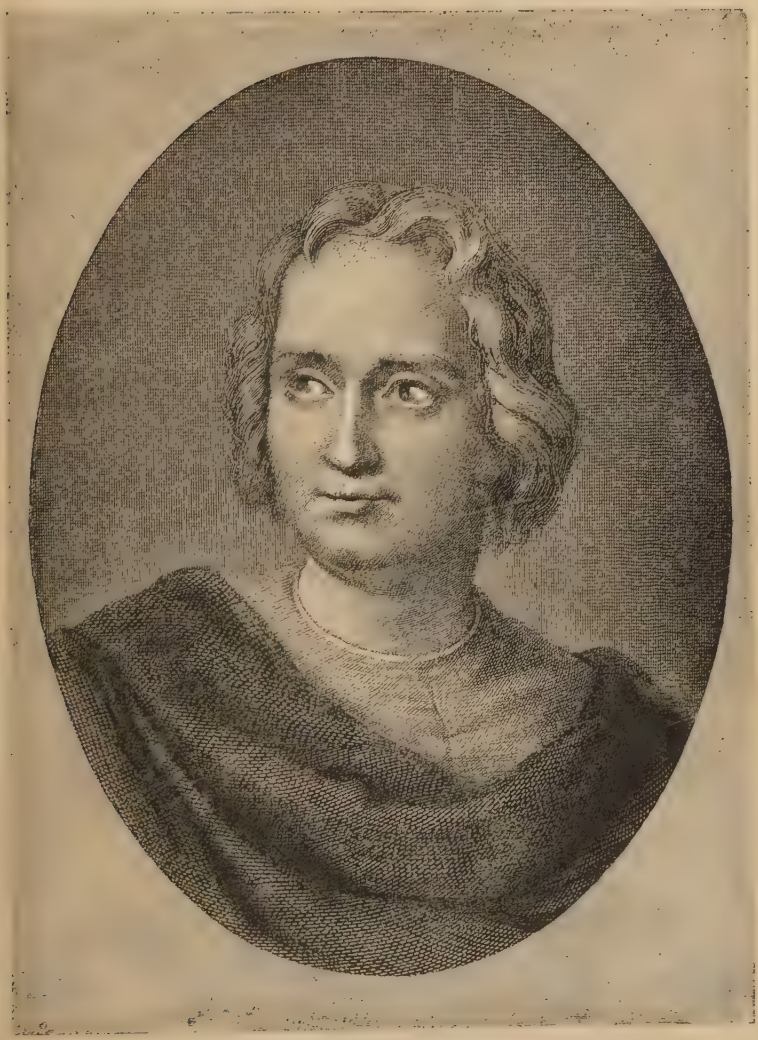
Marco Polo was the first great traveller of the Christian era—indeed, it might be said, of which we have any record. He visited and traversed the mysterious countries of Central Asia, some of which have actually remained unvisited again and sealed to us until the middle of the nineteenth century. It is only by modern travellers that the accounts he gives of these regions have been shown to be strictly true. Not only did he do this, but he describes, although he did not visit, Madagascar, Zanzibar, Abyssinia, and parts of Siberia and Russia, the latter being then a barbarous Tartar state. His travels and descriptions cover more of the earth's surface than has been covered by any other traveller, before or since.

CHRISTOPHER COLUMBUS.

ONE day a weary and wayworn traveller, leading a little boy, his son, by the hand, stopped at the door of a convent near Palos, in Andalusia, to ask for bread and water. The prior of the convent, Juan Perez, happening to pass at the moment, was struck by the appearance of the wayfarer, whose quick, intelligent eye and superior bearing showed him to be no ordinary man.

Entering into conversation with him, the prior was still more impressed by the noble and lofty views of the sailor, for such he was. Taking him into the convent, Perez detained him as his guest, and invited some of his learned friends to meet and converse with him, for the sailor talked of such bold and daring projects as had never been dreamed of before.

This weary wayfarer was Christopher Columbus. He was born at Genoa in the year 1435. His parents were poor; but the boy showing an eager desire for knowledge, they gave him as good an education as their humble means would permit. Having a great love for the study of navigation, he



CHRISTOPHER COLUMBUS.

went to sea when only fourteen years old. For thirty years Columbus was engaged in voyages and expeditions to all parts of the then known world, even on one occasion going as far north as Iceland.

But Columbus had a higher aim than that of remaining a mere sailor all his life. He had heard from ship captains strange stories of trunks of trees, reeds, pieces of carved wood, and other things which they had picked up during their voyages. All these had drifted from the west, over the mysterious sea then known as the Western Ocean. Columbus was therefore led to believe that a land, which he imagined to be India, must exist far across this ocean, from which these things had come.

No one as yet had been bold enough even to suggest sailing over this mysterious sea, beyond which, the superstitious people of the time believed, were all kinds of dangers and terrors. Columbus, one of the most skilful navigators of the age, knew that these dangers were imaginary, and he thought he had only to sail westwards far enough in order to reach India; and this he resolved to do, if he could procure the necessary money and ships.

Here it must be noted that Columbus, like every other learned man of these early times, laboured under two great errors. These were that the earth was far smaller than it really is, and that Asia extended much farther eastwards than it does.

Fired by his great idea, Columbus first applied to the King of Portugal for the necessary means to carry it out; but that monarch, after much hesitation, rejected his proposals. England, France, Spain, and Genoa were then applied to, but in vain; they

either could not afford to fit out an expedition, or regarded the idea as that of a madman.

At last, wandering and penniless, his hopes seemingly crushed, Columbus met with the good Prior Perez. Perez had many influential friends at the court of Ferdinand and Isabella, joint sovereigns of Spain; and they, after great difficulty, persuaded these great rulers to look favourably on Columbus's proposals.

But there was one great obstacle; no money could be spared to equip an expedition, for at that time Ferdinand and Isabella were at war with the Moors. Queen Isabella, however, roused to enthusiasm in the great project, rather than see it fail, pawned her jewels in order to raise the necessary funds. All obstacles were thus removed, and a fleet was fitted out.

This fleet was composed of three vessels, called caravels, but they were not the least like the ships we are accustomed to see. They were very small, not larger than the coasting sloops of our own day, and carried only from fifty to one hundred tons. It was in frail small vessels like these that, on the morning of the 3rd of August 1492, Columbus set sail from the Port of Palos, on a voyage from which no one expected him ever to return.

On the 9th of August the fleet reached the Canary Islands, and here it was detained three weeks owing to the leaky state of one of the vessels, the *Pinta*. Having repaired her, the voyage was resumed, and the sailors broke out into loud lamentations as the last land known to them faded from their sight beneath the horizon.

The Nina.

The Pinta.

The Santa Maria.

SHIPS OF COLUMBUS.

As the vessels sailed on the sailors became more and more discouraged, for still nothing was before them but the boundless ocean. On the 14th September a heron and a tropical bird visited the ships, and some days afterwards the sea was seen covered with weeds. Then more land birds were seen, and more sea-weed was encountered. This alarmed the sailors, as they thought the ships would become entangled in the weeds, and so be unable to get away.

Columbus, disregarding the fears of his crew, sailed resolutely onwards, until, on the 25th, a cry of land was raised from the *Pinta*, which was leading. All were overjoyed, for there seemed to be an appearance of land on the horizon, and Columbus and his officers threw themselves on their knees and returned thanks to God. Next morning, however, their hopes were dispelled by finding that the supposed land was only a cloud. Despair seized the sailors, and they began to be mutinous.

Many birds were again seen, and other indications of land became more numerous. Again and again land was reported, but as often these reports were found to be groundless. The sailors at length began to look upon these indications and false appearances of land as mere snares, intended to lead them on to destruction. They became openly mutinous, and insisted that Columbus should turn back. His situation was desperate, but with stern determination he resisted their threats and importunities.

The next day a freshly broken branch with berries and a piece of carved wood were picked up.

Mutiny and despair now gave way to eager hope, for they thought that land must now be near, and Columbus offered a large reward to the first who should see it. He himself thought it probable that land would be reached that very night, and ordered a good lookout to be kept.

As evening came on Columbus took his station on the poop of his vessel, and maintained a constant and anxious watch. About ten o'clock, as he was anxiously peering out into the darkness, he thought he saw a light flickering in the distance. To make sure that he was not mistaken, he called up two of his officers, one after the other, and asked them if they saw it. They both saw the light, which looked like a torch in the prow of a fishing-boat, as it rose and fell with the waves. The light presently vanished, and the vessels were hove to until morning.

With what excitement did Columbus, his officers, and his men strain their eyes throughout the night to catch a glimpse of the mysterious country they had passed through so many perils to reach. At earliest dawn, on Friday the 12th of October 1492, Columbus beheld the verdant plains and wooded hills of a New World.

The land thus discovered was seen to be an island, covered with a rich and tropical vegetation, and the inhabitants were observed running down to the shore from all directions, and gazing with astonishment at the ships. Columbus, clad in a rich costume, and bearing the standard of Spain, and accompanied by all his principal officers, at once landed. His first act was to kneel down and return thanks to God. His next was to solemnly take

possession of the new country in the name of the sovereigns of Spain, at the same time naming the island San Salvador.

His men now pressed round him, some embracing him, others kissing his hands, and those who had been the most mutinous were now the most devoted. The natives had meanwhile approached, looking with wonder at the newcomers, for they had never seen white men before. When they first saw the ships, they thought they were monsters risen from the deep to devour them; but when they saw the white men land, they thought they had come from the skies on a message of kindness and mercy.

If the natives looked with wonder at the Spaniards, the latter looked on them with no less curiosity. They were of a tawny colour and nearly naked, their skins painted with curious devices, and their hair long and black. As Columbus imagined he had landed on an island at the extremity of India, he called these people Indians—a name which has spread to the whole inhabitants of the two continents. The same error has gained for the islands which he discovered the name of the West Indies.

After visiting other islands in the neighbourhood, Columbus sailed southwards, and came upon the coast of a great country. He was dazzled by the vast extent, the stately forests, the fertile valleys, and the noble rivers of this beautiful land. He thought he had now reached the mainland of Asia, and that he was only about one hundred leagues from the capital of the Grand Khan. It

was no mainland he had reached, however, but the island of Cuba.

Sailing along the coast of Cuba he came to its eastern extremity, and there saw high mountains still farther to the eastward. Steering in that direction he found a vast island, which he called Hispaniola, or Little Spain, but now known as Haiti. The natives here, as at other islands, looked upon the Spaniards as superior beings; and a chief, in return for the protection which Columbus promised him against his enemies, put a gold crown upon his head.

While at this island one of the caravels was wrecked, at which the simple natives showed the utmost grief and concern. So greatly had this island taken the fancy of the sailors, that some of them wished to remain there. Columbus thought this a favourable opportunity to form a colony, so he built a fort from the remains of the wrecked ship, and left the men there on the most friendly terms with the natives.

Although Columbus still wished to make further discoveries, the leaky state of his ships and the murmurings of his crew, who wished to return home, compelled him to turn his face towards Spain. After a stormy voyage, the vessels at last reached Palos on the 10th of March 1493, having been absent only seven months. But in these seven months the most wonderful discovery the world has ever seen had been made. Strange as it may seem, Columbus himself, even to the last hour of his life, was totally unaware of the vast extent and importance of the country which he had made known.

There was wild enthusiasm in Spain when the great news became known. Having been forced to take refuge in the Tagus owing to tempestuous weather, the news of Columbus's great discovery had preceded him. His reception at Palos may therefore be imagined. The bells rang, the town was gaily decked with flags and banners, the magistrates came in state to congratulate him, and the people thronged to the harbour to get a sight of the man who had achieved such wonders. On landing, Columbus, accompanied by a vast multitude of people, proceeded to the church to return thanks to God for the successful issue of his great enterprise.

The court being then at Barcelona, Columbus at once set out for that city, his progress through Spain being a continuous triumphal procession. On his arrival at Barcelona the inhabitants came out to meet him in gala dress, and he rode in procession through the streets, accompanied by many of the greatest nobles of the land. Before him walked the Indians whom he had brought with him, decked in all their savage finery. The streets were thronged with an admiring concourse; the windows and balconies, even the roofs of the houses, were crowded with cheering spectators.

When Columbus reached the hall of audience, and was about to kneel before the sovereigns, they raised him up, and commanded him to be seated. This was a mark of special favour, as very few had been so honoured before. Seated thus, he told the story of his adventures, to which Ferdinand and Isabella listened with rapt attention. When he retired he was attended to his house by all the

court, and for many days he was fêted and honoured as the most illustrious man in Spain.

While at a banquet one day a courtier sneeringly observed that it was no very great feat after all to have crossed the Western Ocean, as any one could have done it. Without directly replying, Columbus asked if any of those present could make an egg stand on end. Much surprised at the question, they all tried, but failed. Columbus thereupon took an egg, and brought it down smartly on its end on the table, thus crushing the shell, so that it stood up. "It is easy enough when you know how to do it," said he. By which he meant that it was easy enough to cross the Atlantic after he had shown them the way.

Columbus was not allowed to rest long upon the laurels he had already won, however. The King of Portugal was jealous of the great fortune which had fallen to Spain, and which might have been his own if he had only listened to Columbus in time. He at once set about fitting out a fleet to seize upon the newly discovered countries by force. When this became known in Spain, preparations were immediately made to send out a great fleet under the direction of Columbus, who was made viceroy and admiral of all the lands and seas of the New World.

On the 25th of September 1493 he set out from Cadiz with a fleet of twenty ships on his second voyage. About forty days afterwards he sighted an island, which he called Dominica. After exploring the group of islands, the Caribbees, of which this formed one, he sailed for Hispaniola.

But a great grief awaited him; the little colony which he had left here under such happy circumstances was no more. The cruel and imprudent conduct of the Spaniards towards the natives had drawn down upon them dreadful vengeance. They were all massacred.

Leaving the unhappy spot, Columbus explored a great part of Hispaniola, and from the amount of gold seen, he thought that the island must be the Ophir of Scripture. At another part of the island he laid the foundation of a city, which he named Isabella, after the queen, but afterwards called San Domingo.

In making a voyage along the southern coast of Cuba he discovered Jamaica. On the 10th of March 1496, Columbus, leaving his brother Bartholomew in command of the new colony, set out with two ships on his return to Spain, and reached Cadiz two months afterwards.

Columbus again received a gracious reception from the sovereigns, although the voice of detraction and envy now began to make itself heard. There were those who were jealous of the fame and success of Columbus; they said that his discoveries had cost much and gained little. The king even began to look less favourably upon him; but Queen Isabella was always his fast friend. Columbus busied himself in getting another expedition fitted out, meanwhile taking care that supplies should be sent out to the new colony, between which and the mother country the communication soon became frequent.

It was not until the 30th of May 1498 that,

with six ships, Columbus was enabled to start on his third voyage. Sailing in a more southerly direction than he had yet done, he came within sight of land on the 21st of July. This was the island of Trinidad. As he was sailing along the southern shore of the island, he saw land stretching to the south for more than twenty leagues. He was surprised at the numerous capes or promontories which came successively into view, each of which he thought was part of a separate island.

On coming to the channel, about fifteen miles broad, at the south-western point of the island, the appearance of the sea frightened the sailors. A current flowed through at such tremendous speed that the water was tossed up in great waves, and appeared to be boiling, and the crew thought they would be swept away or dashed upon the rocks. This channel, from its dangerous appearance, was called the Serpent's Mouth.

Waiting until the tide turned, Columbus sailed through it into a great gulf, with numerous rivers flowing into it. The water of the gulf, he was astonished to find, was almost fresh. This he could not understand until some time afterwards, when he learned that the numerous rivers he saw on the southern shore, and the channels which divided the headlands he thought to be islands, were the mouths of one great river. This river was the Orinoco, and he had, without knowing it, discovered the continent of South America.

Columbus sailed out of the Gulf of Paria by another channel, having the same appearance as the one by which he had entered, and this he called the

Dragon's Mouth. He now sailed for Hispaniola, but affairs had not gone well in the colony. Feuds with the natives, quarrels among themselves, and a scarcity of provisions had brought the colonists to a state of open rebellion.

Columbus and his brother tried to restore peace, but in vain; and the more they tried, the more they were calumniated by their enemies. Every ship that arrived in Spain from Hispaniola brought the complaints and false charges of the discontented. These were eagerly laid hold of by the numerous and powerful enemies which Columbus's success had raised against him in Spain.

An officer named Bobadilla was sent out to investigate these charges, and to punish the guilty persons, whoever they might be. Bobadilla, who was an enemy of Columbus, at once decided that he and his brother were entirely to blame. He deposed them from their posts, arrested them, and sent both to Spain in irons.

Their arrival there in this condition excited such a universal burst of indignation that the great navigator was soon restored to favour. Columbus, however, was so disgusted with the treatment he had received that he resolved to give up all idea of further discoveries, and meditated an expedition to recover the Holy Land from the Infidels.

But his mind always returned to his discoveries in the west. He had formed an idea that a channel existed somewhere to the south of Cuba leading into the Indian Sea, for he had noticed a current set in that direction. He was anxious, if such a channel did exist, to explore it.

He still believed that the islands he had already discovered were part of the islands of the East Indies, and that Cuba was a part of the mainland of Asia. He persuaded the king and queen to look favourably on this project, and, once more thirsting for discovery, he set sail on the 4th of May 1502 on his fourth and last voyage.

On reaching San Domingo, in Hispaniola, he requested of the governor liberty to take shelter in the harbour from a dreadful storm which he saw was impending. The governor, who did not like Columbus, refused permission. A fleet was just on the point of sailing for Spain, one of the ships of which contained property belonging to Columbus. Columbus, from motives of humanity, entreated the governor to at least detain the fleet in the harbour until the hurricane had passed; but the governor, who saw no signs of a storm, again refused.

Columbus put to sea with his ships, hoping to find some safe haven in which to shelter; the fleet which was to sail for Spain also put to sea. In two days the hurricane came on, as Columbus had predicted, but his squadron suffered very little damage. Not so, however, with the other fleet. It was widely scattered on the deep, and most of the vessels were lost, in one of which was Bobadilla. One or two got back to San Domingo, and that which carried the property of Columbus was the only one which reached Spain. When he heard of the fate of the fleet, Columbus was struck with awe, and regarded his own preservation as miraculous.

Leaving Hispaniola, Columbus sailed westwards until he reached the coast of Central America, at

the headland now called Cape Honduras. He explored the coast as far as Porto Bello in Panama, in search of the strait which was to lead him to India. Here the currents and the storms which he encountered so disheartened his crew that he was reluctantly compelled to give up the search.

It is very strange that Columbus should have searched for a strait at the narrowest part of the American continent. He of course did not know this, as the Isthmus of Panama was not crossed, and the South Sea discovered, until ten years afterwards. Although nature has not made a strait here, yet, by the enterprise of man, a channel may one day be cut from ocean to ocean.

Columbus now returned to a part of the coast to search for a gold mine of which he had heard. The natives, however, so incessantly attacked the Spaniards, that at last Columbus set sail on his return. He encountered such stormy weather in crossing the Caribbean Sea that his ships, leaky and rotten, were in danger of foundering. To save them from sinking he had to run them ashore at Jamaica, and was thus deprived of the means of leaving the island.

Columbus's courage did not fail him, although he required it all in the situation in which he now found himself. He sent one of his officers in a canoe to Hispaniola to obtain vessels for his relief. Meanwhile mutiny broke out among his men, and a great number deserted him. These, wandering about the island for some time, embarked in canoes to proceed to Hispaniola, but were all lost in a storm which arose soon after they put to sea.

The natives began to refuse provisions to Columbus and his men, owing to the ill-treatment they had received from the wandering band of mutineers. Columbus took a curious means to remedy this. He saw that an eclipse of the moon was about to happen, so he told the natives that unless they brought provisions he would make the moon vanish that very night. Some of them believed him, but most of them scoffed.

That night the moon began to fade gradually away, to the horror of the simple natives. They came to Columbus and implored him to pardon them and give them back the moon, and he would have all the provisions he wanted. Columbus, waiting until the eclipse was nearly over, told them he would pardon them if they would promise to send him provisions. This they earnestly did, and to their great joy the moon once more shone out brightly.

It was not until eight months had passed that relief came, when the governor, with not much good will, sent two ships. Setting sail, Columbus reached San Domingo; but the governor's hostility to him made matters so uncomfortable that he set sail for Spain, which he reached on the 7th November 1504.

Here he found that his patron and benefactress, Queen Isabella, had died during his absence; and although treated with respect, he saw that he had nothing more to hope for. Completely worn out by illness and hardship, "he hoped to enjoy repose of mind and body, and recruit his health, after such a long series of fatigues, anxieties, and hardships

But wearisome days and nights were appointed to him for the remainder of his life, and the very margin of his grave was destined to be strewed with thorns." In poverty and neglect, he died at Valladolid on the 20th of May 1506, at the age of seventy years.

The story of the life of Christopher Columbus speaks for itself. To his dauntless courage and enterprise we owe a new world, a new people, and a new empire.

VASCO DA GAMA.

"LET it be called the 'Cape of Good Hope,'" said John II., King of Portugal, after he had listened to the story told him by the bold navigator Bartholomew Diaz. Diaz had been sent out in the year 1486 to explore the west coast of Africa. He had proceeded farther south than any previous navigator, when a dreadful storm came on, and he was blown he knew not whither. When he came to the land again, he found it ran west and east instead of north and south, and to his great joy and astonishment discovered that he had been blown round the most southerly point of Africa. As he sailed back again he came to the cape, on the other side of which the land turned northwards, and he called it the "Cape of Storms." King John was delighted at the discovery, but changed the name of the cape to "Cape of Good Hope," because it pointed out the way to India.

It was not until 1497, however, that an expedition was fitted out to make the voyage to India by doubling the Cape. From various causes, one of which was the death of King John, the expedition

VASCO DA GAMA.

had been put off from year to year. The discoveries of Columbus at last roused the new king, Manuel, to action. He was alarmed lest Spain should wrest from him the land the road to which Portugal had bent all her energies to discover for nearly a century.

The bold enterprise of finding a way to India required a bold spirit to undertake it; and after much hesitation King Manuel chose Vasco da Gama, a gentleman of noble lineage. He had already made several voyages to the coast of Africa, and his tried courage and sagacity marked him out as the man to undertake the hazardous enterprise. The three ships selected for the voyage were considered large for the times, although only of one hundred and twenty tons each, manned by crews of fifty men.

Da Gama, the captain-major, commanded one ship himself; his brother Paulo, and a friend, Nicholas Coelho, commanded the other two. When all was ready for departure, the king took an affectionate leave of the navigators, and prayed that they might be successful and return home in safety. On Saturday, the 8th of July 1497, Da Gama left the Tagus, and started on his hazardous voyage.

Gales and contrary winds were soon encountered, and it was five months before the neighbourhood of the Cape was reached; and just as the ships were about to double it, a violent gale from the southward sprang up. This compelled Da Gama to tack, lest he should be blown northward. Ever and anon, as the ships approached the land, the men were disheartened to see it still stretch to the

southward. After making a longer tack than usual, the ships again steered in the direction of the land, but no land was to be seen. On they sailed, and still no land.

Meanwhile the storm gradually subsided, and the ships sailed on with a tranquil wind. Da Gama was convinced he had passed the dreaded Cape; and such indeed was the case, for one morning high land was discovered to the *northward*. For many days the ships sailed along the coast. Many rivers and bays were passed, while the land was seen to be diversified by pleasant meadows and shady woodlands.

One morning a gale suddenly arose, and lest the ships should be driven on shore and wrecked, Da Gama stood out to sea. The master of his vessel entreated him to run back to the land and seek shelter until the storm had passed. But Da Gama told him he had sworn not to go back one foot until he had reached India.

The tempest rapidly increased, and the mountainous seas threatened to engulf the little vessels. The heavens grew black as night, and the rain and the hissing spray blinded the terrified sailors as it dashed in their faces. No orders could be heard for the roar of the tempest. The men grasped whatever was nearest to save themselves from being washed overboard, for the waves swept the decks from end to end. The vessels began to leak, so that they were in danger of foundering. The sailors were sent to the pumps, at which they laboured so hard that many sank to the deck from exhaustion.

The men and pilots besought Da Gama to seek shelter, but he declared he would not turn back, even though they should all perish. The crew clamoured, prayed, and even threatened, but in vain. Mutiny was on the point of breaking out, and Da Gama saw that stern measures were necessary. Three of the most clamorous of the men were enticed into the cabin, and there seized and put in irons. The same was done with the master and pilots.

Da Gama then went on deck and told the men what he had done. He ordered all the instruments of the pilots to be brought to him, and taking them up one by one, deliberately threw them into the sea. He told the men that they had now no one capable to guide them but himself, and that he would navigate the ship, and lead them safely, with the help of God, to their journey's end. The men were overawed by the firmness of Da Gama, and tremblingly returned to their duty.

The storm gradually subsided, and the captain-major made for the land, to seek a place in which to repair the ships, for they could hardly be kept afloat. It was Christmas Day when land was reached, and it was therefore called Tierra de Natal. A river was soon found, into the mouth of which the ships were steered. So overjoyed were the sailors to be once more in safety, that they called this welcome haven "The River of God's Mercy."

All hands were at once set to overhaul the ships, but Coelho's vessel was found to be so much damaged that it was dismantled and burned. After

the ships had been repaired, Da Gama once more set sail, and steered northwards along the coast. He had to proceed very cautiously, for unknown shoals and rocks everywhere lay in his way, while strong currents were encountered, which threatened to carry the ships out of their course, or upon the dangerous shore.

Many large and busy ports, hitherto unknown, or known only by name, were visited. Among these were Mozambique, Kilwa, and Mombasa. These towns were inhabited and governed by Moors, who treated the voyagers well, under the impression that they were Turks. When it was found they were Christians, however, the hatred of the Moors knew no bounds. They tried every means to get the Portuguese into their power, and several times the voyagers had very narrow escapes from their clutches.

The last town visited was Malindi, then an important city with a large trade. The king, unlike the others on the coast, treated the Portuguese with great kindness. The voyagers remained here some time to refit their ships and seek some well-earned rest, after the many dangers they had passed through. The time at last came for departure, and on the sixth of August 1498, Da Gama, furnished with native pilots by the king of Malindi, stood out into the Indian Ocean, on the last stage of his eventful journey.

At the end of twenty-two days, or nearly fourteen months after leaving the Tagus, the coast of India came into view. We can imagine with what feelings Da Gama looked upon the land to

MOMBASA.

which he was the first to find the way, and to reach which he had passed through so many perils. He and all his officers and men fell upon their knees and returned thanks to God for crowning their labours with success.

The part of the coast which Da Gama had come upon was about a hundred miles north of Calicut. As this was the port to which he was bound, he coasted southwards until he reached it. As he did not think it prudent to enter the harbour, he came to anchor two leagues from the city. Although now an insignificant town, in Da Gama's time it was the most important city on the west coast of India. The king of Malindi had warned Da Gama that the people of Calicut were notorious for their want of faith; he was therefore on his guard. It was well for him that he was.

When the ships came to anchor, they were immediately surrounded by the wondering natives in their canoes, and a friendly barter was soon begun. No message or greeting came from the king, or zamorin, however, as Da Gama had expected. Many Moorish merchants resided in the city, and when these heard of the arrival of the Portuguese, they did all they could to poison the zamorin's mind against them. They were afraid that, should the Portuguese once get a footing in the country, their trade would be taken from them.

They succeeded in their designs, and the zamorin determined to get the Portuguese into his power and plunder their ships. He was, however, afraid to show them open hostility, and tried to compass his ends by cunning and treachery—the favourite

weapons of Orientals—while he kept up an outward show of friendship.

At the end of three days the expected messenger arrived. He asked who the strangers were, and what they wanted in Calicut. Da Gama replied that he was the ambassador of the most powerful king of the Christians, who wished to gain the friendship of the great king of Calicut, and to enter into trade with him. The zamorin professed to be well pleased with this reply, and sent presents to Da Gama, who now proposed to go on shore to visit him. But his brother and Coelho were so earnest in pointing out the danger of doing so that he gave up the point, and allowed Coelho to go instead.

Coelho, who took many presents with him, was well received, and obtained the zamorin's permission to trade. The goods the Portuguese had brought with them for this purpose were accordingly landed, and trade was immediately opened with great spirit. The goods desired by the Portuguese in exchange were spices, such as pepper, cinnamon, ginger, and nutmeg. But here the rascally natives tried to overreach the Portuguese. Much of the spice was rotten or mouldy.

Da Gama ordered that no notice should be taken of this, but that they should receive the goods as if they were perfectly sound. He did so in order that the natives might wish the Portuguese to come back again, and so get rid of more of their damaged goods. He also wished to ingratiate himself with the native merchants, for by this time he had heard of the enmity of the Moors. The Moors, seeing this,

got exasperated. They represented to the zamorin that the Portuguese must be pirates, for why should they accept goods which they knew to be damaged if it were not for some bad purpose? They carried their complaints so far that the zamorin determined to put his treacherous plans into execution, thinking that by this time the Portuguese must be lulled into a sense of security.

He intimated to Da Gama that he was ready to receive him at his palace. Da Gama prudently demanded hostages; and after some hesitation three native nobles were sent to the ships. Da Gama, gorgeously dressed, and attended by twelve guards bearing many valuable gifts, went on shore in great state. The zamorin received him graciously, and accepted the presents with greedy delight, and promised everything the Portuguese desired. The audience lasted until the evening; and when Da Gama retired, he was escorted by a body of the zamorin's guard.

A day or two afterwards, Da Gama was again summoned to an audience. He appears to have forgotten his suspicions, for he set out readily enough, escorted by a number of the zamorin's bodyguard. Instead of being taken to the palace, however, he was carried to a strange part of the city, and confined in a hut during the night. The next day he was taken some distance into the country, and kept a close prisoner. He was now certain that treachery was intended, and that he should be killed.

The zamorin's officers tried to induce him to send orders to the ships to come into the harbour;

but this Da Gama resolutely refused to do. He was determined that if he was to lose his life, his ships should not be placed in the power of the treacherous zamorin. He contrived to send off a message by a friendly Moor to his brother, warning him of the danger to the ships, and urging him to set sail at once and leave him. But both Paulo and Coelho refused to desert the captain-major, and at once set about devising means to rescue him.

Fortunately for Da Gama, one or two of the zamorin's officers foresaw possible danger as the result of the course that wily monarch was pursuing. They told him that the Portuguese were powerful, and now that they had discovered the way to India, they would certainly send out a great force to avenge any injury inflicted on their ambassador.

While the zamorin was still undecided whether to give in to the Moors, who wished him to kill Da Gama, or to take the advice of his sensible officers, the three hostages came on shore loaded with presents. They had been released by the captains, who thought that by magnanimously liberating them, they in their gratitude would endeavour to procure the liberation of the captain-major. They judged rightly, for the zamorin now felt compelled to release Da Gama. He even asked Da Gama's pardon for the treatment he had received, but laid the entire blame upon the Moors, and promised to mete out exemplary punishment to them.

Da Gama thought it best to take these explanations and apologies in good part, but got on board his ship without loss of time. The trading

was broken off, and preparations made for immediate departure. A pressing invitation from the zamorin to stay longer was declined, and Da Gama set sail from Calicut. He resolved that the next time he came there it should not be he who should tremble for his safety, but the zamorin himself. He kept his resolution.

With a fair wind, Da Gama sailed along the coast until he reached Cananore, another important city, under an independent king. This king had heard of the doings at Calicut, but having a juster idea of the power of the Portuguese, he resolved to treat them fairly and honourably. He did more, for during the time the voyagers were at Cananore he showed them the utmost kindness and hospitality. Da Gama remained here three weeks, to trade and refit his vessels. On the 20th of November 1498, to the great joy of all, the anchors were lifted and the prows turned towards the west, homeward bound.

The ships had not long put to sea before a contrary wind sprang up. Da Gama therefore put back to a small island off the coast, to await the regular monsoon. By means of a passing trader, the king of Goa heard of the presence of the Portuguese, and determined to capture them. He sent out a large fleet of boats, with the intention of surprising the Portuguese in the night.

Da Gama heard of the intended surprise through some friendly fishermen, and resolved to be beforehand with his unwelcome visitors. When the Goa flotilla arrived at the island, and the pirates—for they were little better—were busily preparing

for the great surprise, the Portuguese suddenly fell upon them. The pirates were taken completely unprepared, and most of them killed or captured. Those who were made prisoners were taken on board the ships and carried off for the purpose of working the pumps.

As soon as the wind was favourable, Da Gama set sail, and after a tedious voyage of five months reached Malindi. The voyagers were joyfully received by the king, and after a stay of twelve days they again set sail. Da Gama avoided the hostile Moorish towns as he sailed southwards, and eventually doubled the Cape without any noteworthy incident.

Contrary winds and calms again delayed the anxious voyagers, and it was not until the end of August that they arrived at the Cape Verd Islands. To Da Gama's profound grief, his brother, whose health had been broken down by the tropical climate, died here, almost within sight of his native shores.

On the 18th of September 1499, Da Gama dropped anchor in the Tagus, having been absent two years and two months. He and his fellow-voyagers were received with the greatest joy by their king and countrymen, who had given them up for lost. Da Gama for his great services received the title of Don and a pension, while the officers and sailors were rewarded far beyond their expectations.

In 1502 Da Gama undertook another voyage to India with a large fleet, and made many friendly treaties with native princes. Among the cities he

visited was Calicut, where the zamorin tried on his old tricks. Da Gama was too powerful this time to be played with, and in revenge for this and past injuries bombarded the city, laying it in ruins, and destroying the royal palace.

It was twenty-one years before Da Gama again visited India. In 1524 he went out as viceroy, for by this time the Portuguese had large possessions there. He ruled with stern and inflexible justice, for abuses had sprung up among the Portuguese officials which required a strong hand to put down.

He was not spared long, however, to carry out his reforms, for five months after he arrived in India he was seized with illness at Goa, and died on Christmas Eve 1524, at the age of fifty-six years. The news of his death was received with the deepest grief in Portugal. A few years afterwards his remains were conveyed to his native country, and interred with great splendour at Vidiguerya, the village in which he was born.

To the Portuguese the services of Da Gama were without price. The discovery of the route to India at once made Portugal one of the richest and most powerful of European nations, rivalling even Spain, for the wealth of the East overshadowed the wealth of the West, great as it was. The Portuguese consider Da Gama as famous a man as Columbus, for although he did not discover a new world, he gave the Portuguese a world teeming with wealth, the road to which had hitherto been unknown.

FERDINAND MAGELLAN.

WHEN Columbus sailed westwards he made his name immortal by discovering America, but he failed in his primary object—that of reaching the East Indies. A few years later Vasco da Gama discovered the eastern route to the Indies by doubling the Cape of Good Hope. It was the fortune of a third navigator to succeed where Columbus had failed—in reaching the East Indies by sailing westwards. This third navigator, second only in fame to Columbus himself, was Ferdinand Magellan.

It might seem at first that the route by the Cape would have satisfied the great maritime nations of the age, but for several reasons it did not satisfy Spain. The route by the Cape was wholly in the hands of the Portuguese, at that time most formidable rivals of the Spaniards in colonial enterprise. This route also was long, and dangerous because of the hurricanes which swept the Indian seas, the monsoon seasons not being then understood. It was necessary for Spain therefore to secure an independent road, free from all these difficulties, and

FERDINAND MAGELLAN.

it was thought that this could be found by sailing westwards.

Ferdinand Magellan was a Portuguese by birth, and was born about the year 1470. At first he was employed in the colonial service of the Portuguese in India and Sumatra, and afterwards in Morocco, where he received a wound which lamed him for life. Disgusted at not receiving the reward he thought his services merited, he transferred his allegiance to Spain, where he was favourably received.

He proposed to the King of Spain to lead an expedition to the East Indies by sailing westwards into the South Sea (as the Pacific was at first called), then recently discovered by Bilboa. The king was pleased with the proposal, and at once agreed to it.

At this time, so great was the rush across the Atlantic, after Columbus had shown the way, that a great part of the coasts of South and Central America had been explored. Magellan hoped, by continuing the exploration of the coast southwards, to find a strait leading into the South Sea. He seems to have had little doubt as to the existence of such a passage, but it had yet to be found.

A fleet of five ships was fitted out at Seville for this great enterprise, and placed under the command of Magellan. It set sail from the port of San Lucar on the 20th September 1519. After an uneventful voyage of two months across the Atlantic, the expedition arrived at Rio Janeiro, then a small Portuguese settlement. As this was the last civilized place at which the ships would touch, a great quantity of provisions was taken on board to serve

them during their perhaps long voyage into unknown seas.

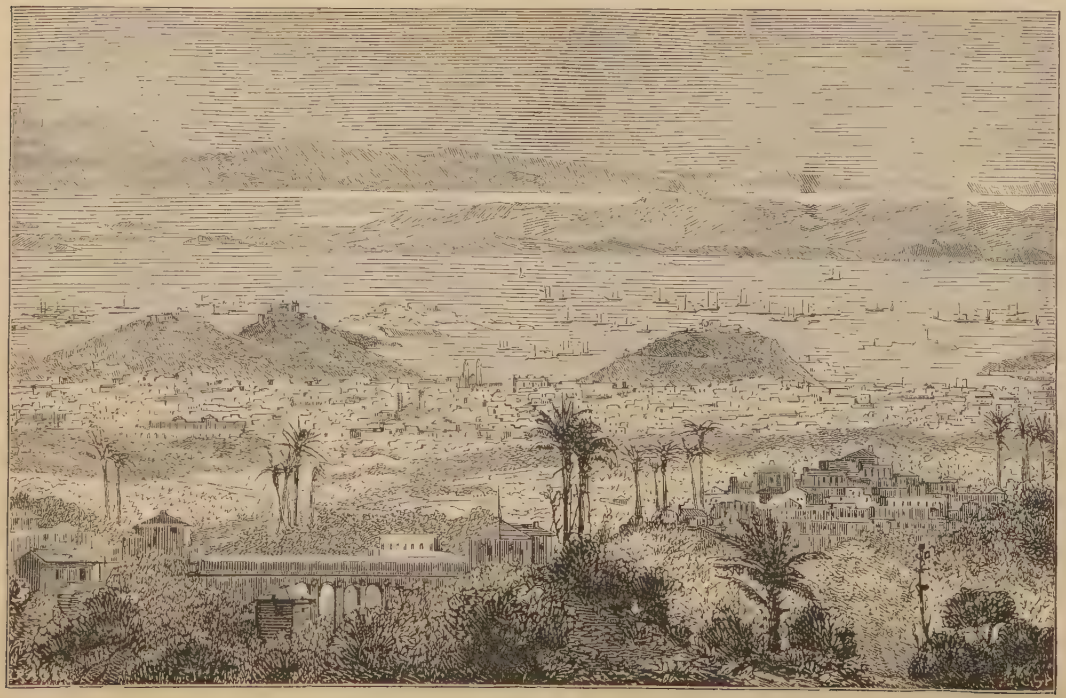
Magellan sailed along the coast, proceeding slowly southwards, in search of the wished-for strait. On coming to the great estuary of the Rio de la Plata, he sailed up until he reached fresh water before he was assured this was not the channel he was looking for. Still coasting southwards, boisterous weather was encountered, and on reaching a sheltered harbour, which he called San Julian, Magellan took refuge there until the wind should change.

But to the great astonishment of the sailors, instead of getting better, the weather grew gradually worse, with cold, sleet, and rain, for which they were ill prepared. It being then about the month of March, winter was just coming on, but the poor sailors did not know this; they never thought that the seasons would be reversed when they crossed the equator.

Magellan called the surrounding country Patagonia, because of the great size of the feet of the natives, *patagon* in Spanish meaning "big-footed." These natives astonished the Spaniards because of their great size and uncouth appearance, as well as by their childishness.

A native who had been enticed on board one of the vessels was shown his own face in a mirror. These people are not remarkable for beauty, but the face the man saw glaring at him must have been weird and horrible in the extreme, for he started back in the utmost terror, upsetting two of the crew who stood behind him. It was some time before he recovered his composure.

Trouble and danger harassed Magellan while



RIO JANEIRO.

wintering in this harbour. Many of his officers, being Spaniards, were naturally jealous that Magellan, a Portuguese, should have the supreme command. They thought this a favourable opportunity to mutiny and murder him. Fortunately the plot was discovered, and the ringleaders were punished with merciless severity. Two were executed, and two others turned adrift in the bleak and desolate country. Here also one of his vessels was wrecked while on an exploring cruise to the southward, and the crew with difficulty saved.

Having been detained five months at San Julian, Magellan once more set sail; but shortly afterwards the fleet encountered a violent storm, and had to put into a harbour, where they remained two months to rest and repair damages. Setting sail again, the storm-worn mariners continued their search. Many a commander would have turned back, disheartened by the long-continued stormy weather and the apparent hopelessness of the quest. But Magellan possessed indomitable courage, which nothing could overcome, and he persevered, confident of success.

At last, on the 21st October 1520, an opening was seen which Magellan hoped might be the long-looked-for channel whose existence was almost given up. Its appearance might well have dismayed bolder sailors than the Spaniards. Towering precipices on each side, which seemed to reach to the clouds, frowned down upon them in sullen blackness, while their frail ships were tossed about on the tempestuous waters beneath. Magellan, however, unmoved by these terrors, sailed boldly in.

As they proceeded, the narrow entrance expanded into a bay, girdled by terrific crags, while the land beyond rose in serried ranks of snow-clad mountain peaks. The sailors became terror-stricken, and believing that the dreadful place they were in led to nowhere but destruction, clamoured to be taken back. Magellan with much difficulty overcame their fears, and, the wind being fair, sailed on.

The channel varied greatly in breadth as they proceeded, being sometimes not more than a mile and a half broad. Having sailed upwards of fifty leagues, a broad channel was seen opening out in front, and two ships were sent on to explore it, while the other two came to an anchor.

During their absence a violent storm arose, which raged for thirty-six hours, and the ships were given up for lost. The Spaniards now gave way to despair, thinking they must all perish, when at the end of two days the missing ships were seen approaching, with flags flying and guns firing.

The captains reported that they had seen a passage ahead, but that they thought it wise to return to announce their discovery, lest their companions should think they were lost in the storm. On account of a cloud of smoke Magellan had seen rising to the southwards, he named the land on that side Tierra del Fuego, or "Land of Fire."

The fleet sailed joyfully on again, the mariners' hopes rising high, when another passage was seen opening out to the south-east. Two ships were sent to find out whither it led, but only one returned. The Spaniard who commanded the other had basely deserted Magellan, and had insisted on returning home.

The fleet, now reduced to three, pressed on for more than a hundred leagues, until on the 28th of November, on rounding a headland, an ocean unbroken by land burst upon their view. The passage was at last accomplished, and the navigators emerged triumphantly upon the waters of a boundless ocean, whose placid surface gleamed in the summer sun. They were the first who ever sailed into this unknown sea.

The fleet now sailed out over the calm waters of this mighty ocean, which Magellan called the Pacific, because no storm was encountered to break its calm surface. The spirits of all rose high, and most of all Magellan's, who was convinced he would make some great discovery. Although nothing was to be seen around them but the ocean, the navigators were filled with wonder and admiration at what they saw in the heavens.

Stars and constellations hitherto unknown shone down upon them by night. The beautiful Southern Cross glittered brilliantly above, while two bright starry clouds to the southward pointed out to them the Antarctic Pole. These two clouds have been named after the great navigator, and are known as the Magellanic Clouds.

It is a very curious circumstance that in his voyage across the Pacific Magellan could not have taken a course more calculated to avoid all the islands with which that ocean abounds. Taking a north-westerly course, he passed to the northward of the huge archipelago known as Polynesia. Thence steering almost due west, he only came across on the whole voyage two small uninhabited islands.

Magellan being himself the first to cross the Pacific, of course knew nothing of its geography. He was always in expectation of reaching the Molucca Islands, the goal for which he had undertaken the voyage, and had no idea of the vast extent of the ocean upon which he was embarked.

After a voyage of more than three months and a half, during which the mariners suffered from scurvy and hunger, they reached a group of islands. They gladly cast anchor in this haven of rest, but the natives proved themselves such audacious thieves, stealing everything they could lay their hands on, that Magellan was glad to sail off without the provisions for his starving crews which he had hoped to obtain. He called the islands Guam, which is Spanish for thief, but they are now known as the Ladrones.

Continuing his voyage westwards for ten days more, he discovered another group of islands, much more extensive than the former. Here the natives were hospitable, and treated the exhausted and famine-stricken wanderers kindly. Magellan took possession of these islands, the Philippines, in the name of the King of Spain, and they afterwards became one of the richest possessions of that country.

Once a year from Manilla, the capital, there sailed for Spain a ship laden with treasure. This ship was known as the Manilla galleon, and it was the great ambition of the English buccaneers to capture her, which they several times did. Magellan found the islands fertile and the inhabitants comparatively advanced in civilization. Gold was so common that the natives attached little value to it,

and a large ingot of gold was offered for a few strings of glass beads.

Magellan made his headquarters at an island called Zebu, in the centre of the group, the town of which was ruled by a chief or rajah called Humabon. The condition on which Humabon acknowledged the authority of Spain was that he should not only be rajah of the whole island of Zebu, but of the neighbouring island of Matan as well. Now the rajah of Matan did not quite see the force of this arrangement, and defied the rajah of Zebu. Humabon thereupon asked Magellan to help him to subdue the refractory chief of Matan.

Magellan was very glad to do this, as he thought he would be able to show the islanders how powerful the Spaniards were. The Spaniards, being protected by steel armour, thought they could defy any number of the natives, who were almost naked, and had only wooden shields to defend themselves with. An expedition accordingly set out for Matan—Magellan with sixty picked men, and Humabon with thirty war canoes.

Magellan requested Humabon not to interfere in the coming conflict, but to allow the Spaniards to do all the fighting, and he would see how quickly his enemies would fly. Humabon and his force therefore sat in their canoes and watched the fray from a safe distance.

The Matan force, numbering about fifteen hundred, showed unexpected courage, and stood firmly against the Spaniards, who had expected them to fly at the first encounter. The bullets of the Spaniards were in a great measure stopped by the shields of

their opponents, and did little execution. When the natives saw that their poisoned arrows could not penetrate the armour of their foes, they aimed at their legs, which were unprotected, and Magellan's men began to fall fast.

He thought to draw off the natives by setting fire to their houses, but this only infuriated them the more, and they came on with redoubled determination. The Spaniards fought valiantly, but they began to be overwhelmed by superior numbers.

While Magellan was bravely fighting at the head of his men he was wounded in the leg by a poisoned arrow. When he began to feel its effects he ordered a retreat to the boats. At this a panic seized the Spaniards, and they fled, leaving only a few faithful followers to protect him. When the natives saw this they came down upon the little party and surrounded it. Magellan himself fought desperately, his helmet being twice knocked off his head.

He was at last wounded severely in the arm, and, unable to use his sword, the natives crowded round him and killed him after repeated wounds. Humabon, seeing how the battle was likely to end, came to the help of the Spaniards, but too late to save the brave Magellan's life. Thus perished, on the 27th April 1521, Ferdinand Magellan, in the fifty-first year of his age.

The survivors of the expedition soon after set sail from the Philippines, and ultimately reached the Moluccas, thus achieving the great object of their leader of reaching the islands by sailing westwards. After resting here some time they started on their final voyage to Spain. On the 3rd October

1522 a frail, weather-beaten vessel, with eighteen men on board, sailed into the port of San Lucar. This was all that was left of the gallant fleet that had sailed from the same place three years before.

Ferdinand Magellan was the first to circumnavigate the globe, for although he perished while only half-way, his survivors finished his work; he had besides already sailed between the East Indies and Europe. He was the first to enter and traverse the Pacific Ocean, and he was the first to reach Asia by sailing west. But if it were only for his sailing twelve thousand miles over an utterly unknown sea, his fame as one of the world's greatest navigators would be firmly established.

HENRY HUDSON.

IN the year 1551 a number of London merchants formed themselves into a company for the purpose of trading with Russia, Turkey, and other places. This company was called the "Company of Merchant Adventurers," but was commonly known as the "Muscovy Company." In 1600 another company was formed to trade with the East, and especially with India; this was the since famous "East India Company."

Although the primary purpose of these companies was trade, yet it is to their honour that they had before them another object—that of increasing the power and wealth of England by undertaking voyages of discovery, mainly for the purpose of opening up new trade routes. In pursuing this object, they both early directed their attention to endeavouring to find out a new road to India and the East by the north-east or north-west. Thus, under the auspices of these London merchants, English Arctic exploration was first begun.

Sebastian Cabot, John Davis, and others in the employment of the companies, had penetrated for

some little distance into the mysterious regions of the north in search of these roads. They had always, however, been turned back by the difficulty of making their way through the ice, or the extreme cold, for they never understood that exceptional measures were necessary to withstand the rigours of an Arctic climate.

In the year 1607 it was determined to make another attempt to reach the East, not by either the North-East or the North-West Passages this time, but by the very simple plan of sailing due north, *across the North Pole.* At this time very little was known of the Arctic regions, except the south-western coast of Greenland, Davis Strait, part of Spitzbergen, and as far east as Novaia Zemlia.

Nothing was known of the immense barriers of impenetrable ice which everywhere guard the approaches to the Pole—impenetrable, that is, to sailing ships such as these ancient mariners possessed. It is not so surprising, therefore, that these worthy merchants of 1607 should not see any very great difficulty in sailing across the Polar Sea into the North Pacific.

An expedition was fitted out for this purpose by the Muscovy Company, and placed under the command of a tried and skilful seaman who had long been in the service of the company. This commander was Henry Hudson. It is unfortunate that we should know little of Hudson except during the last few years of his life; all we do know is that he was a citizen of London, where he had a wife and family. We do not even know the year he was born, but it is probable that when he sailed on

his first Arctic voyage he would be between forty and fifty years of age.

The preparations made for this formidable voyage across the North Pole may very well excite our astonishment, when we think of the elaborate preparations made in our own day for Arctic expeditions. Hudson's ship was a little vessel of eighty tons, called the *Hopewell*, with a crew of ten men and a boy, Hudson's own son. The *Hopewell* sailed from Gravesend on the 1st of May 1607, and the first land sighted was a part of the east coast of Greenland now known as Cape Brewster.

Leaving the Greenland coast, where, Hudson says, the air was as temperate as that of England, he stood out in a north-easterly direction for Spitzbergen. But when he reached that place, ice, fog, and tempestuous weather, besides the lateness of the season, made him despair of proceeding any farther. Having no stores sufficient to last through a long Arctic winter, he began his return home, and arrived safely in the Thames on 15th September.

Next year, the Muscovy Company again sent Hudson to the north to seek a passage to China by the north-east. He set sail from the Thames on 23rd April 1608, with a crew of fourteen men. Shortly after passing the North Cape, "one of our men," says Hudson, "looking overboard, saw a mermaid, and calling up some of the company to see her, one more came up, and by that time she was close to the ship's side, looking earnestly at the men. A little after, a sea came and overturned her," and they caught sight of her tail as she disappeared. Others besides these two credulous

sailors of Hudson's have imagined they have seen a mermaid, but these mermaids generally turned out to be seals.

Hudson intended to pass between Spitzbergen and Novaia Zemlia, but he found the ice in such quantities that he lost all hope of forcing a passage in that direction. He resolved, therefore, to make for the Strait of Waigatz, to the south of Novaia Zemlia. Here, also, for he had an eye to profit as well as to discovery, he expected to collect such a quantity of walrus teeth as would defray the expense of the expedition.

This, together with the time occupied in exploring the mouth of a river on the mainland—probably the Petchora—delayed him so long that the end of the season drew near. Finding he could get no farther without being frozen in, he returned, and reached Gravesend on 26th of August.

Although Hudson's two voyages had failed in their object, they were not without result. They led to an extensive whale-fishery in the seas around Spitzbergen, to the great profit of those engaged in it. Hudson became known, besides, as a bold and enterprising Arctic navigator; and it was this, no doubt, that led to his being employed the next year by the Dutch.

The object of this voyage is not very clear, although in its results it was one of the most important in the history of North America. Hudson sailed from the Texel in a small vessel called the *Half-Moon*, on the 26th of April 1609, and steered towards the North Cape, intending, it is supposed, to make the North-East Passage. Soon after round-

ing the cape, Hudson changed his mind, possibly from the quantity of ice met with, his experience teaching him that it would be useless to persevere.

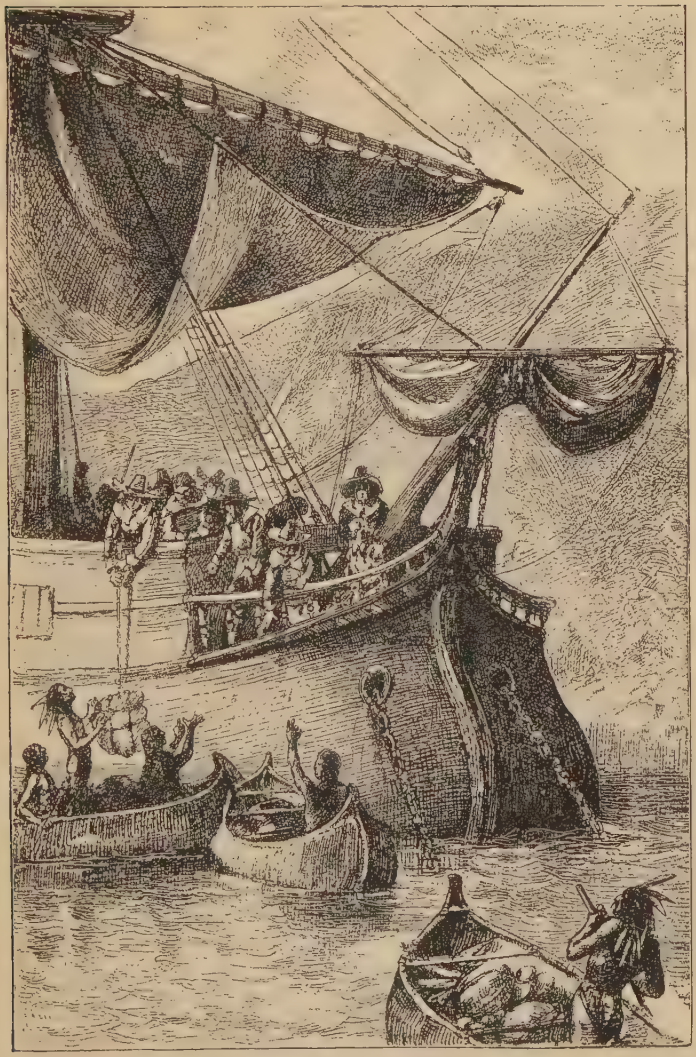
Putting about his vessel, he crossed the Atlantic to Newfoundland, and sailed down the coast as far as Chesapeake Bay in Virginia. Returning, on coming to Long Island he sailed in past Sandy Hook, and entered the beautiful river which bears his name. He explored it as far as where Albany now stands, and to within sight of the Catskill Mountains.

In 1621, the Dutch established a colony at the mouth of the river, which they called New Amsterdam, afterwards called New York, on its falling into the hands of the English.

Returning across the Atlantic, Hudson put in at Dartmouth, on the 7th November; he, however, was not allowed to return to Holland, the English at that time being jealous of Dutch enterprise.

Two merchants of London, named Wolstenholme and Digges, resolved to send out an expedition to make the North-West Passage, for they were confident that such a passage existed. If there was one man more fitted than any other to be successful in the enterprise, it was the well-tried and resolute Henry Hudson.

Nothing can show more clearly the utter ignorance which then prevailed as to Arctic navigation than the manner in which this expedition was fitted out. A little vessel of fifty-five tons—about the size of a fishing smack—called the *Discovery*, was provisioned for six months, and furnished with a crew of twenty-two men, including Hudson's son, who had accompanied his father in all his voyages.



THE "HALF-MOON" IN THE HUDSON.

The *Discovery* left the Thames on the 22nd of April 1610, and Hudson made, in the first place, for Iceland. Sailing thence, he doubled Cape Farewell, and entered Davis Strait, where he was baffled by ice and contrary winds. Persevering, however, he entered a strait, the mouth of which had already been discovered by Davis, on the north coast of Labrador. Sailing through the strait, named after him, he came to a cape, which he called Cape Wolstenholme, apparently the north-westerly point of Labrador. At the same time he discovered a cluster of islands to the north-west, the nearest headland of which he called Cape Digges.

Turning to the southwards, a great sea opened out before him: this sea is the bay which bears the name of the intrepid navigator — Hudson Bay. The season was now advanced, and he saw that unless he wintered where he was, he must return at once. He called his crew together, and gave them their choice of returning or remaining.

Hudson, who himself wished to remain so as to be able to resume his explorations in the spring, appears to have prevailed on the majority of the crew to side with him. But this roused a spirit of discontent among the others, which was fostered by the mate and the boatswain. Hudson thought to check this mutinous spirit by severe measures, so he disrated these two officers and put others in their places; but this severity increased the discontent.

Meanwhile, he had pressed on southwards, and after a three months' voyage through a labyrinth of islands and intricate channels, entered a bay in the south-east on 1st November. Here the ship

was immediately hauled on shore, and on the 10th they were frozen in.

The provisions which Hudson had brought with him had by this time been used up, but there was no want of food. The forests surrounding the winter quarters—for it must be remembered that the place was not in the Arctic regions, but actually in Canada—abounded in white partridges, which kept the crew abundantly supplied. But as the winter advanced, these were succeeded by geese, ducks, and other fowls more difficult to catch, and soon the men were reduced to eat frogs and moss.

When spring came, and the ice began to break up, large quantities of fish were taken; but this resource also soon failed. The continued scarcity of provisions added to the discontent already existing among the men, and this was inflamed by a young man called Greene. This Greene was of respectable connections but dissolute manners, and had been cast off by his family. Hudson, finding him destitute, had befriended him and had taken him to his house. As a means of reforming Greene, he had taken him with him on the voyage in the capacity of clerk.

When the ice was sufficiently broken up, Hudson left his winter quarters on the 18th of June 1611. He divided among the crew the stock of provisions that remained, and which was just sufficient to last for fourteen days. He hoped, however, when he reached Cape Digges, to get a supply of birds, for many had been seen there before.

Greene and the disrated mate and boatswain now formed a despicable plot to get rid of the

captain and the sick men, of whom there were three or four, and share their provisions among the remainder. On the morning of the fourth day after sailing the mutiny broke out. As Hudson was coming out of his cabin, he was seized by three of the mutineers, and his hands tied behind him. The carpenter and two other men, hearing the noise, ran on deck, and attempted to rescue Hudson, but they were soon overpowered.

The shallop was now hauled alongside, and the sick men forced into her; also the three men who had defended Hudson. The carpenter would have been allowed to remain, but he declared that rather than live with such a pack of ruffians he would die with his captain. Hudson's son, and lastly himself, were then hustled into the boat, making nine in all. A fowling-piece, some ammunition, a little meal, and an iron pot were then thrown in, and the tow-rope was cut.

The ship stood away, but was presently hove to to allow the mutineers to ransack the captain's cabin. The men in the boat pulled after the ship with all their might; but the scoundrels on board, when they saw this, quickly got under way again, and left their unfortunate captain and his boat's crew adrift among the floating ice. Such was the fate of poor Henry Hudson; he and his boat's crew were never seen or heard of again.

There is a beautiful legend, told by Washington Irving, of Henry Hudson and his men. A ne'er-do-well, called Rip Van Winkle, who lived in the village of Sleepy Hollow, at the foot of the Catskills, climbed up into the mountain one day while

hunting, and fell in with Hudson and his crew. The men were playing at bowls, the sound of the balls reverberating among the hills like thunder. Hudson invited Rip Van Winkle to drink with them, which he did, and immediately fell asleep. He did not wake again for twenty years. When thunder was heard among the Catskills, the people said, so the legend runs, that it was Hudson and his crew playing at bowls. Their spirits had returned to haunt that beautiful region which Hudson had himself discovered.

Swift retribution followed the ringleaders of the mutiny. On reaching Cape Digges, Greene, who had made himself captain, and four men went on shore to barter with the Eskimos for provisions. Owing to some roguery on Greene's part, who tried to swindle the natives, he and the party were suddenly set upon and nearly all massacred. Only one man escaped, the four killed being, as it happened, the principal mutineers.

The survivors, now reduced to desperate extremities, endeavoured to shape their course for Ireland. When at last they dropped anchor at Berehaven, only five, and these but living skeletons, were left.

Hudson was one of the pioneers of Arctic exploration, and it was he who made the first deliberate attempt to reach the North Pole. He failed in his various attempts for the same reason that all Arctic navigators, except a few in the nineteenth century, have failed—nature conquered him. He was one of England's hardiest mariners, and if it were only for the discovery of the river and the bay which bear his name, he would always be famous.

CAPTAIN COOK.

JAMES COOK was the son of a farm servant, and was born at the village of Marton, in the North Riding of Yorkshire, on the 27th of October 1728. He learned to read and write at the village school, and at the age of twelve was apprenticed to a general dealer in the small fishing-town of Straith, near Whitby.

But weighing pounds of sugar and measuring yards of ribbon did not suit young James's fancy. He longed to go to sea. Every spare moment he had was passed in the company of the sailors who frequented the port. His father, seeing his inclinations, let him have his way, and James entered himself as a ship boy on a collier.

Of all kinds of sea life, that on board a collier is the hardest and dirtiest, but there is no better place for learning seamanship. James earnestly applied himself to his new profession, and by his diligence and intelligence rose, at the age of twenty-seven, to the command of a vessel of his own.

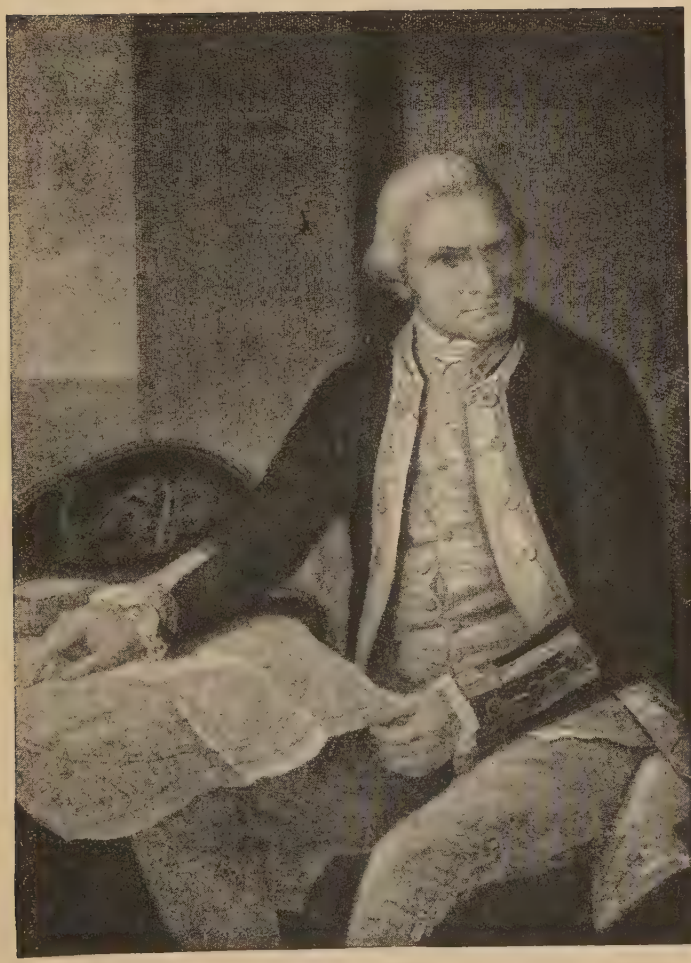
The French war which broke out in 1755 was

the occasion of Cook's first step towards fame. Thinking his first duty was to serve his country, he volunteered on board the *Eagle*, of sixty guns. The young seaman's knowledge of his profession and steadiness of conduct soon gained him advancement, and in four years he received a warrant as master.

In 1759 his ship sailed for Canada with the fleet ordered to co-operate with General Wolfe. When the fleet reached the St. Lawrence, it was found that the French had lifted all the buoys which marked the passage up the river. The perilous duty of taking soundings to enable the ships to ascend was entrusted to Cook. In the darkness of the night, and sometimes under the guns of the French, he performed his task so well that the chart he made was afterwards published by the Admiralty.

After the capture of Quebec, Cook devoted his spare time to the study of navigation and mathematics, and was frequently employed in making charts and surveys of the coasts of the newly-acquired possession. He returned to England in 1762, when he married; and two years afterwards he was sent out to Newfoundland to survey the coast.

A few years after this, a matter of much interest to scientists began to be discussed. This was the transit of Venus, which was to take place in June 1769. The British Government determined to send out an expedition to Otaheite, in the Southern Pacific, as the most favourable spot for the observation of the transit. It was the great good fortune



CAPTAIN COOK.

of Cook, at the age of forty, to be selected to command the expedition.

The *Endeavour*, a twenty-four gun ship of three hundred and seventy tons and a crew of eighty-four men, was fitted out and provisioned for eighteen months. The object of the expedition was not only to observe the transit of Venus, but to make a voyage of discovery in the Pacific Ocean. Messrs. Green, Solander, and Banks (afterwards Sir Joseph), accompanied Cook in charge of the scientific departments.

The *Endeavour* sailed from Plymouth on the 26th of August 1768, and after an uneventful voyage entered the Strait of Le Maire, near Cape Horn, on 14th January. Next day, Cook cast anchor in the Bay of Good Success. Here a great disaster very nearly overtook the expedition. Messrs. Green, Solander, and Banks, with several attendants, went on shore and ascended a hill in the vicinity in search of plants. As they climbed up they were so suddenly overtaken by intense cold that the whole party were prostrated, and two negro servants died. It was two days before the survivors got back to the ship. Yet it was the middle of summer in these latitudes! So sudden are the changes of temperature in this inhospitable part of the earth.

The natives of Tierra del Fuego seemed to Cook to be the most debased in the world. They led a wretched existence from scarcity of food and raiment; they did not even know how to build houses to shelter themselves from the inclemency of the weather. Despite this, they appeared to be

contented, and rejected such articles as hatchets, knives, and fish-hooks, which might have been of use to them, and only coveted beads and useless trinkets.

The *Endeavour* doubled the Horn on 21st January, and sailed in a north-westerly direction into the Pacific. Many islands were seen, and several new ones discovered, most of which appeared to be inhabited. Their beautiful and luxurious verdure was grateful to the eyes of the weather-beaten sailors, after the barren rocks of Tierra del Fuego. Otaheite, or Tahiti as it is now called, was sighted on 11th April, and two days afterwards the *Endeavour* cast anchor in the harbour.

The ship was immediately surrounded by the islanders in their canoes, with every token of welcome and friendship. Captain Cook, with Messrs. Green and Solander, went on shore to select a spot on which to erect an observatory. The chiefs and natives showed the utmost hospitality and good nature, but one and all, from the highest to the lowest, were most expert thieves. This accomplishment, which they possessed in common with all the Pacific Islanders, led to a few misunderstandings, but no permanent ill-will.

The observatory was erected, and the instruments were about to be put in position, when it was discovered that the quadrant was missing. After much difficulty, it was recovered just in time from the native who had stolen it; he had been attracted by the glitter of the mounting, and, with great ingenuity, had taken it to pieces. It was soon put together again, and all was ready.

With great anxiety the scientists awaited the eventful moment, for if the day was cloudy all would be in vain. The 3rd of June broke with a cloudless sky and brilliant sun. From half-past nine in the forenoon until half-past three in the afternoon, under a burning sun, the scientists remained at their posts. During that time Venus was seen slowly passing across the sun's disc; never was observation more successful.

At this time Otaheite was ruled by a queen called Oberea, who showed great friendship for the strangers. Captain Cook presented her with a child's doll, with which she was greatly delighted. While walking with the captain, a chief, who was jealous of her having the doll, tried to take it from her. Cook had to pacify him by presenting him with one also.

Captain Cook circumnavigated and explored the island, as also the other islands in the vicinity. He called the group the Society Isles, in honour of the Royal Society. On the 13th of July he took leave of Otaheite, and steered for New Zealand.

On the 6th of October, a coast of great extent came into view. Cook had reached New Zealand, of which little was then known but the name; indeed, no one knew whether it was an island or formed part of a vast continent. The *Endeavour* entered a bay at the mouth of a small river, but the natives were so hostile that all attempts to land or to open communication with them were fruitless. As, therefore, no fresh water or provisions could be procured, Cook called the place Poverty Bay.

He weighed anchor and followed the coast northwards until he doubled the most northerly point. He then coasted the western side until he came to a high mountain, which he named Mount Egmont. A great gulf now opened out before him; he entered, and came to anchor in a sheltered sound on the southern side, which he called Queen Charlotte Sound. Here the *Endeavour* was refitted and provisioned.

The natives, unlike nearly all the inhabitants of New Zealand, were friendly, and did what they could to make their guests welcome. At the end of twenty days, Cook pursued his voyage through the gulf, which proved to be a strait dividing the North from the South Island. He then sailed northwards to where he had been before, and thus accomplished the circumnavigation of the North Island.

On the 21st of March, Cook left New Zealand and steered for New Holland, a mysterious country, of which the vaguest ideas prevailed as to its dimensions. After a month's voyage he reached the coast and entered a sheltered bay, where a landing was attempted.

But several natives, who had gathered on the beach, objected to this proceeding; they flourished spears and boomerangs, and threw stones. A few shots were fired over their heads, at the noise of which they seemed stunned, and on recovering their faculties fled into the woods. A party was landed to fill the water-casks, and Cook, with Solander and Banks, started out to explore the vicinity. Many beautiful birds were seen, and from the great variety of plants and flowers which were discovered, the place was called Botany Bay.

In a week, sail was again made, and the *Endeavour* proceeded northwards along the coast. For 1,300 miles the *Endeavour* safely coasted the great continent, but the voyage was monotonous. There was nothing remarkable in the country; for the most part it was sandy, sterile, and dry, and few inhabitants were seen.

On the 10th of June, the *Endeavour* became involved among rocks and sandbanks; but after some anxious hours, as dusk approached, she got free, as all supposed. About eleven o'clock at night, almost without warning, the ship struck on a reef, and a wave lifting her up, she was forced into a hollow on the top of the rock. To make the matter more serious, it was the time of high water, so that the tide could not be relied on to float the ship off.

Every expedient was tried to float her; the guns, the fresh water, and the ballast were thrown overboard. The launch was lowered, the sails were set, and they tried, with the aid of the wind, to tow her off the rock, but she remained immovable. Then an anchor was carried out astern and dropped in deep water, and an attempt was made to warp her off, but the capstan was manned to no purpose.

Daylight revealed the situation in all its danger; land was twenty-five miles distant, and there were not sufficient boats to hold all the crew. Even if they did reach land, they would be at the mercy of hostile savages. The horror of the situation was increased by the discovery that the ship was rapidly filling with water. It was found that the bottom had been pierced in several places, and the pumps had to be manned and kept going incessantly.

Fortunately, at a time when death stared all in the face, the utmost coolness and discipline was preserved. For nearly two days the *Endeavour* was motionless. The sea was calm, otherwise the ship would have been dashed to pieces. A supreme effort was made to haul her off the rock at the midnight tide. The capstan was again manned; every officer and man not employed at the pumps lent his aid. Just at high water the vessel moved! Slowly she grated over the rocks, and at last got clear.

Would she float? With the utmost anxiety all awaited the issue; but strangely enough the vessel did not make more water than when she was on the rock. A sail was hauled under her bottom, which in a great measure stopped the leaks, so that only one pump was necessary to keep the water under. Sail was made for the land, which was reached, but not until the *Endeavour* had run aground twice.

A sheltered harbour was found at the mouth of a river, which Cook named the Endeavour River, and the ship was careened. It was then discovered why she did not founder when she slipped off the rock. Firmly jammed in one of the largest leaks was a huge piece of rock, which had prevented the ingress of the water. Had it not been for that piece of coral, the *Endeavour* must have foundered with all on board.

The natives at Endeavour River were very friendly at first, but a quarrel arose because the sailors refused to give them some tortoises which they had caught. They went off in a fury, and set fire to the bush which surrounded the English

encampment. The encampment was destroyed, and the fire spread from hill to hill, and burned fiercely for several days.

Cook left the Endeavour River on the 14th of August, and continued his voyage northwards, constantly in danger from the numerous shoals and rocks which abounded on that part of the coast. At last the most northerly point of New Holland, named Cape York, was doubled, and the *Endeavour* stood out for New Guinea. Here again the natives showed such hostility that all intercourse was prevented. Cook sailed westwards, following the coast, and thus proved that New Guinea was not joined to New Holland, as had been supposed.

Of Cook's first voyage little remains to be told. He reached the Dutch East Indies, where unfortunately at that time fever raged. Many of the crew died, as did also Mr. Green, the astronomer. On the 27th of December, Cook stood out across the Indian Ocean, and after touching at the Cape of Good Hope, anchored in the Downs on the 11th of June 1771. He had been absent nearly three years.

The public satisfaction at the result of the voyage was great, for vast additions had been made to the geography of the known world. Cook was promoted to the rank of commander in the Royal Navy, the Royal Society treated him with special notice, and scientific men vied with each other to do him honour. He busied himself with a narrative of his voyage, but he had soon to put the materials in other hands. His success had only whetted the public appetite for new discoveries; he was again wanted.

The idea that a great southern continent existed had been prevalent for more than two centuries. Although Cook had sailed over part of the region in which it was supposed to exist, the chimera was not altogether dispelled. It was now determined to settle the question, and Captain Cook was selected as the most capable man for the purpose.

Extraordinary care was taken in fitting out and provisioning the expedition. Experience had taught Cook what was requisite for a lengthened voyage, especially into unknown parts, far from civilization. Two ships, the *Resolution*, of 462 tons, and the *Adventure*, of 336 tons, were built specially for the purpose. The first was commanded by Captain Cook, and the other by Captain Furneau, while in the interests of science two naturalists and two astronomers were appointed to accompany the expedition. Cook's instructions were to proceed to the Cape, and from there to sail southward to look for the supposed continent, and afterwards to circumnavigate the globe in southern latitudes.

The expedition sailed from Plymouth on the 13th of July 1772, and anchored in Table Bay on 30th October. On the 22nd November, Cook resumed his voyage to the south, in search of land which had been reported in latitude 54° south by the French navigator Bouvet in 1739. Soon heavy gales were encountered, and the cold increased to an intense degree.

On 10th December, immense icebergs were seen, and four days afterwards the ships were stopped by a field of ice, which stretched east and west to an unknown distance. In a few days this

obstruction was cleared, but floating ice, gales, and fogs rendered Cook's position perilous. On the 17th of January, the latitude of 67° 15′ south was reached, where all further progress was stopped by impenetrable walls of ice. Cook now thought it prudent, as Bouvet's land could not be seen, and as summer was passing away, to return northwards, lest he should be frozen up in the ice.

He next searched for land that had been discovered a few months previously in latitude 48° south by another French navigator. This, also, could not be found. Cook concluded that the land these navigators had seen must be inconsiderable islands, wrongly charted. Otherwise, as he had sailed over the regions in which they were reported to be, he must have discovered them. In this conclusion, as it afterwards turned out, he was correct.

Cook stood eastwards, battling with gales, fogs, and cold, until he reached 136° east longitude, without discovering the great southern continent. He then made for New Zealand, to refit and give his wearied crews a much-needed rest. He anchored in Dusky Bay, at the south-western extremity of the South Island, on 26th March. He had sailed in 117 days a distance of 3,660 leagues without sight of land.

It would be tedious to follow Captain Cook through the remainder of his voyage, and the principal incidents may be summed up in a few words. He circumnavigated the South Island of New Zealand, and afterwards sailed into the Pacific. He visited Otaheite and many other islands, discovered New Caledonia, and then returned to New

Zealand. He then went back to southern latitudes, and sailed eastwards until he doubled Cape Horn. As to a southern continent, Cook was convinced that if any such existed, it must be so far to the south as to be perpetually enveloped in ice, and therefore of no practical value. More recent investigation has again proved Cook to be right.

He took possession of the island of South Georgia, which he named after George III., and discovered Sandwich Land, and reached the Cape of Good Hope on 22nd March 1775. He sailed for England, and reached Plymouth on 30th July, after an absence of three years.

Captain Cook returned to find himself famous, and the scientific world was excited in a marked degree by his discoveries. He was promoted to the rank of post captain, was elected a member of the Royal Society, and received its gold medal.

About this period, the idea of the existence of a northern passage between the Atlantic and the Pacific was again revived. Despite several failures to find this passage between the years 1740 and 1773, it was resolved in 1776 to send out yet another expedition for the same purpose.

Captain Cook offered his services, which were gladly accepted; indeed, no one better fitted for the command could have been found. His old ship the *Resolution*, and the *Discovery*, commanded by Captain Clerke, were fitted out for the voyage. Cook was instructed to proceed by way of the Cape and New Zealand into the Pacific, after which he was to try to make his way eastwards by Behring Strait to Hudson Bay.

Cook left Plymouth on his third voyage on the 12th of July 1776. He touched at the Cape, and then steered for Van Diemen's Land, or Tasmania, as it is now called. He reached the latter place on the 26th of January following, but never discovered that it was an island; he imagined it to be the southern extremity of New Holland. He next made for New Zealand, and brought up in his old anchorage in Queen Charlotte Sound; after which he sailed into the Pacific, and visited the Friendly and Society Islands.

Cook now sailed northwards and crossed the equator; and on the 18th of January 1778, discovered a group of islands in 20° north latitude. To these he gave the name of the Sandwich Islands, in honour of Lord Sandwich, the First Lord of the Admiralty. On the 7th of March he came in sight of the coast of New Albion, so named by Drake, in 44° north latitude.

From this place he followed the coast of America northwards, vainly looking for a strait which would lead him eastwards. He arrived at length in Behring Strait, and passed the most westerly point of the North American continent, which he named Cape Prince of Wales. He penetrated as far north as 70°, where he was stopped by impenetrable fields of ice.

For ten days he beat about, trying to force a passage; but at last, convinced of the impossibility of the task, he returned and explored both shores of the strait. As the season was far advanced, he determined to winter at the Sandwich Islands, and again try to force a passage the following year.

He arrived at the principal island, Owhyhee, or Hawaii, which he now discovered for the first time, on the 30th of November.

At Owhyhee Cook was treated with marked deference by the chiefs and islanders—indeed they almost worshipped him. The ships were constantly kept supplied with provisions by the priests, for which they refused to accept any payment. These extraordinary tokens of friendship puzzled the English, but the probability is that the natives looked upon Captain Cook as a kind of god, whom it was necessary to propitiate.

This great friendship, however, did not prevent thieving to such an extent that severe measures were necessary to repress it. On one occasion four guns and a volley of musketry were fired over a canoe in which a thief was making his escape. The only effect was to astonish the natives, without creating much alarm.

The provisions on the island were rapidly decreasing; and although the islanders were too polite to say so, or to alter their attitude in any way, it was apparent that they wished their guests to be off. When one of the chiefs was asked his opinion of the English, he replied that his people supposed them to be natives of a country where provisions were scarce, and that they had come to Owhyhee to fill their stomachs.

At last, on the 4th of February, the ships sailed from Owhyhee, loaded with provisions, a parting gift of the king. The ships had only been two days at sea, however, when a violent gale arose, during which the *Resolution's* foremast was so

SCENE IN THE SANDWICH ISLANDS.

damaged that a return to Owhyhee was necessary for repairs.

No sooner had the vessels entered the harbour than an ominous change was observed. The place seemed deserted, and no one came near the ships. In a few days, however, the king came on board, and for some time all went on peaceably enough, although the chiefs showed a growing enmity and jealousy.

One day, the natives, for some provocation they alleged they had received, seized the cutter of the *Discovery*. The next morning, the 14th of February 1779, Captain Cook, accompanied by a lieutenant of marines and nine men, went on shore with the intention of securing the king's person until the boat should be restored.

The king readily consented to go on board the *Resolution;* but just as he was stepping into the boat that was to convey him to the ship, his chiefs interposed, and forcibly detained him. Captain Cook saw that it would be useless to attempt to carry out his purpose, especially as the crowd on the beach grew very threatening in their attitude.

As he walked down to his boat, a rumour arose that a chief had been shot. The change in the attitude of the crowd was instantaneous. The women and children were sent away, and the men armed themselves and put on their war mats. Cook ordered the marines to march down to the boat and re-embark.

At this moment a man flung a stone at him. The captain turned and fired one of the barrels of his musket, loaded with small shot, at the savage.

He was not much hurt, and threatened to fling his spear. As several others came forward at the same time, the captain fired his other barrel among them, and killed the nearest.

This was the signal for a general attack. A shower of stones was sent amongst the marines, who returned it with a volley of musketry. Cook signed to his men to cease firing and to get into the boat; but the natives rushed upon them with their spears, forced them into the water, and killed four. At the same time Captain Cook was struck on the back of the head with a club, and fell on his face in the water. He struggled to rise; but the natives, with shouts of joy, rushed upon him and killed him with repeated blows of a dagger.

"Such was the fate," says Lieutenant King, who wrote the account of the voyage, "of our most excellent commander. How sincerely his loss was lamented by those who owed their security to his skill and conduct, it is impossible to describe. The task would be equally difficult to represent the horror, dejection, and dismay which followed so dreadful a catastrophe." It was some days before the remains of Captain Cook were, with great difficulty, recovered, and solemnly committed to the deep.

The command now devolved upon Captain Clerke, who resolved to carry out the object of the expedition. He returned to Behring Strait, but again found it impossible to penetrate the ice, so he sailed southward along the coast of Asia to Canton. From there the expedition sailed for the Cape, and arrived at the Nore on the 4th of October 1780.

DEATH OF CAPTAIN COOK.

The news of the death of Captain Cook was received with the profoundest grief in England. His widow was granted a pension of £200 per annum, and the Royal Society struck a gold medal in commemoration of him, and other honours were paid to his memory, not only in England, but abroad.

Captain James Cook was undoubtedly the greatest navigator England has ever possessed. He found half of the map of the world a blank; by his indefatigable zeal and sagacity he filled the greater part of that blank up, and left little for his successors to do. He dispelled illusions of vast continents and practicable north-west passages. But by far his greatest feat was that which will make his name imperishable in the annals of his country: he conferred on it the inestimable benefit of a new and mighty field for colonization and enterprise—Australia and New Zealand, the England beyond the sea.

JAMES BRUCE.

JAMES BRUCE was born at the family residence of Kinnaird, in Stirlingshire, on the 14th of December 1730. When twelve years of age he was sent to Harrow, where he remained four years, and then returned to Scotland to study for the Bar. The law, however, was distasteful to him, and after some time he gave it up, and went to London, with the intention of proceeding to India as a free trader. While in London, he embraced an opportunity of entering the wine trade. This business took him frequently to the Continent, where he travelled through France, Portugal, and Spain.

In the latter country he employed his leisure in the study of Arabic monuments. This soon grew into a passion for Eastern travel, and to this end he now devoted himself. In 1762, through the friendship of Lord Halifax, he was appointed British consul at Algiers, and here the definite object of the discovery of the source of the Nile occurred to him. With this object in view, he set himself assiduously to study Ethiopian and Arabic, and also medicine,

as he imagined his progress would be easier if he travelled in the character of a physician. He resigned his post in 1765, and travelled through the Barbary States and Asia Minor, preparatory to his great journey into Abyssinia, a country which had been sealed to the outside world for ages, and in which the source of the Nile was supposed to be.

In the beginning of July 1768, Bruce arrived at Cairo, from which place he intended to begin his journey. As the Turkish Government had prohibited such enterprises as Bruce intended, he disguised himself as a dervish, and pretended that his destination was India. He took the precaution to furnish himself with letters of recommendation from the Bey of Cairo, as representing the Turkish Government, to the various governors and chiefs in Egypt and the countries bordering on the Red Sea. Armed with these, he embarked on the Nile with a few attendants, and reached a small town named Cus, below Thebes. Here he left the Nile and crossed the desert to Cosseir, where he took ship to Jeddah. He spent some time in exploring the shores of the Red Sea, then little known, and sailed for Massowah, the port of Abyssinia.

On the 19th of September 1769, Bruce and his attendants landed at Massowah, and his difficulties immediately commenced. The Naybe of Massowah had, some time before, quarrelled with the Ras Michael. The Ras Michael was an extraordinary personage. He was an old man nearly eighty years of age, and ras or governor of the neighbouring country of Tigre, a province of Abyssinia. Besides this, he was prime minister of Abyssinia, and

the king was a mere puppet in his hands. He had already caused two kings to be assassinated, and shortly after Bruce's arrival, ordered the reigning monarch's breakfast to be poisoned, because he was too old and imbecile to be of any use, and put his grandson upon the throne. He was perpetually engaged in civil war, but always managed to crush his enemies.

Although the naybe had quarrelled with this redoubtable personage, yet he was afraid of him. But for this, he would have made short work of Bruce, by murdering him and dividing his property, then the customary way of treating strangers in Massowah. Bruce had, much to the naybe's rage, managed to send off a letter to the ras announcing his arrival, and the naybe knew if he harmed the traveller he would only be adding fuel to the fire with which the ras had threatened to consume him. He next peremptorily demanded presents, which were as peremptorily refused; and not only this, but Bruce told him in very plain language what he thought of him.

On the 15th November, Bruce left Massowah for Gondar, the capital of Abyssinia. He avoided the usual and easy road, for he had heard that the naybe had sent out banditti to waylay and murder him. He took a longer and more difficult but safer road, which led over the mountain of Tarenta. For a few days he travelled over a dry, gravelly plain, thickly covered with acacia trees, until he reached the foot of the mountain.

While camped one night near an almost dry torrent, a thunderstorm broke among the moun-

tains above. "Suddenly," Bruce says, "we heard a noise in the mountains above louder than the loudest thunder. Our guides flew to the baggage, and removed it to the top of a small hill near, which was no sooner done than we saw the river coming down in a stream about the height of a man, and the breadth of the whole bed it used to occupy."

About the mountains of Abyssinia Bruce remarks that it is not their height that occasions surprise, but their number and extraordinary forms. Some are flat, thin, and square, like slabs set on end; some are like pyramids; others like obelisks or prisms; and some, the most extraordinary of all, pyramids pitched upon their points, with the base uppermost. These strange shapes are due to the violent and incessant rains, which, in the course of ages, have worn the rock into these forms.

With great difficulty Bruce managed to get himself and his baggage over the mountain of Tarenta, which was so precipitous in places that he had to use both hands and knees. At the farther side he came to the town of Dixan, which was, he says, "the rendezvous of the bad people of the country. The inhabitants were Moors and Christians (most of the natives of Abyssinia are of a Christian sect called Copts), and the only trade they carried on was the selling of children, for whom they found a ready market at Massowah."

Bruce now journeyed through a fine country, desolated, however, by the fierce tribal wars which continually raged between the different towns and villages. The next town of consequence he came to was Adowa, the capital of Tigre Here he was

well received by the governor, who insisted upon treating him, despite his protests, as an exalted personage. It was a welcome change to the traveller, who had, all along, been compelled to resist the extortions, in the name of customs, of every petty chief whose town he had passed through. Bruce remained here a month, and then resumed his journey.

For some time he proceeded by a road cut in a mountain of red marble, which had on the left a parapet of the same material. At equal distances in the wall were hewn pedestals, upon the tops of which were seen the marks where the colossal statue of Sirius or the Dog Star had stood. There were one hundred and thirty-three of these pedestals, but only two statues remained. The road was supposed to have been the work of the ancient Egyptians.

One day Bruce met three soldiers driving a cow before them, which he supposed had been stolen. Suddenly they tripped up the beast, and while two held her fast to the ground, the third very deliberately cut open the skin on her buttock, and cut off a large beef-steak. The skin was fastened over the wound again with wooden skewers, and the whole plastered over with mud. The cow was then made to get up, and was driven on, to furnish another meal, probably, in the evening. This was the strangest thing Bruce had yet seen, but he afterwards learned that this barbarous mutilation was a common practice in the country.

He now arrived at the town of Lamalmon, where customs were again demanded. Bruce so astonished

and pleased the officials, however, by his feats of horsemanship and dexterity with the rifle, that they not only let him pass free, but honoured him as a great man.

On the 14th of February 1770, after a journey accomplished with infinite perseverance through a wild and dangerous country, Bruce, with intense joy, saw before him, at a distance of ten miles, Gondar, the capital of Abyssinia. When he reached the city small-pox was raging fiercely, and he was immediately sent for by the queen to attend some of the royal family who were ill. To avoid difficulties, Bruce transformed himself, so far as outward appearance went, into an Abyssinian. As he could speak several of the dialects of the country as well as Arabic, he soon rose in favour with the natives, especially the Moorish portion, and cured many of them of small-pox.

On the 14th of March the Ras Michael arrived, and Bruce had his first audience with him. The ras received him kindly—Bruce had previously cured his son of small-pox—but plainly warned him of the danger he would be subject to in travelling about the country. He told him the only manner by which he could assure his safety was to make him commander of a body of horse. This Bruce thought it politic not to refuse, although it might interfere with his researches; he therefore accepted the post and took his leave.

He attained the height of favour, not only with the officials but with the king himself, by shooting a candle through a deal table. Such a miracle had never been dreamed of, and Bruce was accounted

a very wonderful man indeed, and one not to be trifled with.

Bruce now lived in comparative security, but was not yet able to proceed to the source of the Nile, which was in the south, in the territory of a chief called Fasil, who was then in rebellion against the ras. Bruce accompanied an expedition against Fasil, and although he was defeated, Bruce did not then accomplish his object.

But the opportunity soon came. Fasil made peace with the ras, and Bruce started on the 28th of October, with guides and attendants. When he reached Fasil's country, he went to that personage to obtain the necessary permission to travel through his territory. Fasil, however, was surly, and refused to allow him to proceed.

"I found now, as I thought," says Bruce, "all my hopes of arriving at the source of the Nile were for ever ended. All my time, all my sufferings for so many years, were thrown away, from no greater obstacle than the whimsies of one barbarian, and that within forty miles of the place I so much wished to see." But, after all, Bruce was equal to the occasion. He won over the chief by his bold language and resolute demeanour, for courage is the most admired of all virtues in barbarous countries. Fasil gave him guides and an escort, with liberty to travel all over his dominions.

On the 4th of November, Bruce came in sight of the village named Geesh, near which the Nile rises. The river was here not more than four yards wide, nor above four inches deep. Bruce told his guide to lead him at once to the head of the Nile.

ABYSSINIAN SOLDIERS.

The guide took him to a small hill above a marsh. "Look at that hillock," said he, "of green sods in the middle of that watery spot; it is in that the fountains of the Nile are to be found. If you go the length of the fountain, pull off your shoes, for the people here are pagans, and worship the Nile."

"Throwing off my shoes," says Bruce, "I ran down the hill, which was thick grown with flowers, towards the little island of green sods, which was about two hundred yards distant. I reached the brink of the marsh and came to the mound of green turf, which was in the form of an altar, apparently the work of art, and I stood in rapture over the principal fountain, which rises in the middle of it. It is easier to guess than to describe the situation of my mind at that moment, standing at that spot which had baffled the genius, industry, and inquiry of both ancients and moderns for the course of over three thousand years!"

He presently turned to his Greek attendant, and called to him, "Strates, faithful squire, come and triumph with me over all the kings of the earth, all their armies, all their philosophers, and all their heroes!" In the midst of his sublime thoughts, however, he was brought to earth by his attendant's reply. "Sir," said he, "I do not understand a word of what you say, and as little what you mean, but you had better come out of that bog."

Bruce had attained the grand object of his search. He had found, as he thought at the time, the source of the Nile. But although it was only the Blue Nile, its principal tributary, it was from it

the periodic floods came which fertilized Egypt. It was what the ancients regarded as the Nile; from that little fountain sprang the mighty river, the most famous in the world, the object of worship of the ancient Egyptians, whose armies had perished in the vain attempt to reach the spot where Bruce now stood.

Bruce remained four days at Geesh, and then returned to Gondar. When he reached that place, all was confusion. Civil war had again broken out, and shortly after he arrived the rival faction gained the ascendency, and the Ras Michael was banished. He now set himself to think how he was to return. He could not again trust himself to the tender mercies of the Naybe of Massowah, so he determined to return by the kingdom of Senaar and the Nubian Desert.

The terrible hardships Bruce endured on this journey, especially in the desert, where he nearly perished, cannot be told. He arrived, more dead than alive, at Cairo on the 10th of June 1773. He embarked at Alexandria for Marseilles, and left behind for ever that "dreadful country," as he called it.

He travelled some time on the Continent, and then returned to England. The stories he had to tell, strange and remarkable as they were, of his adventures among the Abyssinians, and of their manners and customs, were almost universally disbelieved.

He retired to his estate in Scotland, and after some years published an account of his travels, which met no better fate than his stories. It was

regarded as a huge compilation of "traveller's tales." But subsequent travellers have proved Bruce's accounts to be true in every respect. He lived in retirement at Kinnaird, disgusted with the world, but beloved by his family and friends, and died on the 27th of April 1794.

Bruce was a courageous and daring man, and he had the invaluable gifts—tact, and the power of winning the confidence of the barbarous tribes among whom he lived. By the Abyssinians he was beloved, respected, and admired as "Yagonbe, the white man."

MUNGO PARK.

MUNGO PARK was the son of a farmer, and the youngest of thirteen children. He was born near Selkirk, in Scotland, on the 10th of September 1771. He received his early education at the parish school of this little border town, but afterwards studied medicine at the University of Edinburgh. As a ship's surgeon he made several voyages to the East Indies and other places, and thus gained experience as a traveller.

On his return from a voyage to Sumatra, he learned that the African Association were looking for a suitable person to explore that region of Northern Africa lying inland from the Gambia River, and more particularly to find and trace the river Niger, of which nothing was then known except the name. Park offered his services to the association, and to his great joy was chosen, for he had a passionate desire to explore a country so little known.

Undeterred by any thought of danger, Park sailed from Portsmouth on the 22nd May 1795 on his eventful journey. Six weeks later he reached

Parks Route in 1795
Return in Da
Route in 1805
MAP
OF PARKS TRAVELS
IN
AFRICA
with the
COURSE of the NIGER.
Scale of British Miles
PART OF AFRICA
ATLANTIC OCEAN
COAST OF GUINEA
GULF OF GUINEA
BIGHT OF BENIN
Timbuctoo
Sansanding
Sackatoo
Yaoori
Where Park was killed
Head of the Gambia
Head of the Senegal
Sierra Leone
C. Palmas
C. Formosa
C 3 Points
Cape Coast
Accra
Badagry
Kirree
R. Benta
R. Quorra
Old Calabar R
Fernando Po
Bight of Biafra
C. Verd
Rio Grande
Gambia R.
Senegal R.
Jaloffs or Faloffs
Kaarta
Bambarra
Wangara
Kong Mts
Kong
Kamalia
Jallonka Wilderness
Foota Jallo
Bondou
Woolli
Bambouk
Kasson
Jarra
Benoom
Kemmoo
Galam
Bambarra
Dantilliboo
Jassoo
Sibbi
Moorzan
Sulia
Yamina
Sego
Tabba
Kaarta
Kong Mts
Wangara

Pisania, a British trading settlement on the Gambia River, where he was kindly received by the English residents.

Here he immediately set to work to learn the Mandingo tongue, which is the language in general use among the natives in that part of Africa, without a knowledge of which his journey would have been impossible. While so employed he was attacked by the fever peculiar to the country, from which he did not recover until the beginning of November, when the rainy season was over. This being the most favourable time to begin his journey, he prepared to start.

Compared with the equipments of more modern explorers, Park's preparations were very small. His equipment consisted of a negro servant, a boy, a horse for himself, and two asses for his attendants; and his baggage consisted of provisions for two days, a small quantity of beads, amber, and tobacco for barter, some changes of clothes, and a few arms and scientific instruments.

Thus lightly equipped, he on the 3rd of December took leave of his friends, who never expected to see him again, and turned his face resolutely towards regions and dangers utterly unknown.

"I rode," says Park, "slowly into the woods. I had now before me a boundless forest, and a country the inhabitants of which were strangers to civilized life, and to most of whom a white man was the object of curiosity and plunder. I reflected that I had parted from the last European I might probably behold, and perhaps quitted for ever the comforts of civilized society."

Park's journey was for some time uneventful. His path lay alternately through dense forests, infested with wild animals, and fertile plains. He passed safely onwards, however, his only misadventures being the exactions of native chiefs, who, in the name of taxes, gradually plundered him of his goods. On February 12th he reached the capital of the kingdom of Kaarta, the black chief of which bore the rather inappropriate name of Daisy.

Here he found his progress interrupted. Daisy was at war with the King of Bambarra, through which country Park's road lay. As he could not go directly from one country to the other without being taken for a spy and killed, the only road open to him was a circuitous one through a Moorish kingdom lying to the northward, and thence into Bambarra. Daisy urged him to return and await a more favourable opportunity; but Park was resolved to go on, although in following this route he would have to trust himself to the tender mercies of the most fanatical of Mohammedans, who hated white men and Christians.

With indomitable courage Park advanced to meet these dangers. His anticipations of ill-treatment were fully realized. No sooner had he advanced into the Moorish country than his sufferings commenced. He was robbed by the Moorish chief Ali of the poor remainder of the baggage he possessed, and left helpless and destitute, to the derision of the Moors, who took every opportunity of ill-treating and insulting him. Deprived of his attendants, and suffering from hunger and thirst, his condition was indeed pitiable.

At one time the Moors proposed to kill him; but, on the suggestion of Ali's son, it was decided that his eyes should be put out, as they resembled those of a cat. Ali, however, said he would wait until his wife, who was then in the north, had seen him. It is probable that this woman was the means of saving Park's life; she not only sent him food, but had him carried to a distant town, out of reach of his worst enemies.

Distressing and dangerous as Park's situation was, he was not idle during the weary days of his captivity. He occupied his time in noting the manners and customs of the Moors, and in learning to write Arabic.

After four months' captivity, deliverance came in an unexpected manner. Ali had quarrelled with the chief Daisy, who one night attacked the town in which Park was confined. In the confusion and terror of the moment he contrived to gain possession of his horse and make his escape.

In order to avoid wandering parties of Moors, who might take him back to the land of thieves and murderers, as he calls it, he went by way of the desert. But here new dangers assailed him: he could neither procure food nor water.

Overcome by thirst, he one day could proceed no farther, and was on the point of perishing, when a thunderstorm came on, accompanied by a deluge of rain. Refreshed and invigorated by the rain, which he caught by spreading out his clothes, he proceeded on his journey, meeting sometimes with kindness, and sometimes with contempt and ill-treatment, at the negro villages through which

he passed. At one of these, a negro who had befriended him asked for a lock of his hair, as he had heard that white men's hair would give the possessor all the knowledge of white men. Although Park had never heard of such a simple mode of education, he complied with the request.

Pressing onwards, he at last found himself in the kingdom of Bambarra, to reach which he had passed through so many dangers. As he was approaching the capital, some negroes who were travelling with him suddenly exclaimed, "See the water!" and, looking forward, he saw with infinite pleasure the object of his mission—the long-sought-for, majestic Niger, glittering in the morning sun. "I hastened to the bank," he says, "and having drunk of the water, lifted up my thanks in prayer to the Great Ruler of all things, for having thus far crowned my endeavours with success."

It was indeed a grand discovery of one of the greatest rivers of Africa, and from the number of towns and the multitude of people who dwelt on its banks, one of the most important.

Park now arrived at the capital, but to his great disappointment the king refused to see him, and sent him a message to depart forthwith, as he was doubtful of being able to protect him from the hatred of the Moors. He generously sent a present of five thousand cowries, to purchase provisions on the way, and also furnished him with a guide for a considerable part of his journey down the river. The king was, perhaps, a little suspicious of Park's intentions; he probably thought it strange that a white man should come such a great distance to see

a river, as the guide inquired if there were no rivers in his own country, and whether one was not much like another.

Once more Park set out. The friendly guide warned him that the farther down the river he went, the more the country was under the influence of the Moors, and that Timbuctoo, the great object of his search, was wholly inhabited by them, and they allowed no Christian to live there.

But Park had now advanced too far on his journey to think of turning back on such uncertain information. He accordingly made his way down the left bank of the river, meeting as before with alternate kindness and derision, the latter chiefly from the Moors.

One day, as Park and his guide were riding through a forest, the latter suddenly called out, "A very large lion!" and there, to Park's horror, he saw a large red lion a short distance off, with his head couched between his fore-paws. As he could not ride away, his horse being too fatigued, he expected the lion to spring upon him; but the king of beasts suffered them to pass unharmed.

Soon after his encounter with the lion, Park had to abandon his horse. The poor beast was worn out with fatigue, and could travel no farther. As he sorrowfully looked at it as it lay panting on the ground, he could not help thinking that he should himself, in a short time, lie down and perish in the same manner—of fatigue and hunger. Deprived of his horse, he trudged along wearily on foot, until he arrived at a town on the Niger called Silla.

Here Park was convinced that he could proceed no farther. Worn out by sickness, hunger, and fatigue, half naked, and without any article of value by which he might procure provisions, clothes, or lodging, he began to reflect seriously on his situation. The tropical rains had set in, and in a few days travelling would be impossible. But, above all, he perceived that he was advancing more and more into the power of those merciless fanatics, the Moors; he was afraid he should sacrifice his life to no purpose, for his discoveries would perish with him. Even in returning, the prospect was gloomy, for he had before him a journey of many hundred miles.

Collecting all the information he could procure concerning the course of the Niger and the countries it flowed through, he turned his face reluctantly westwards; but at the very outset he found his progress made difficult by the flooded state of the country.

In returning, he fortunately recovered his horse at the place where he had abandoned it, for the negroes had found and taken care of it. With this good fortune, however, he received bad news. The King of Bambarra had sent messengers out all over the country to arrest him, having been induced to do so by the Moors, who said he was a spy. At one town he would have been captured, had not the friendly negroes met him at the gate and turned him away. He was obliged, therefore, to avoid the towns, and force a path through forests and over wildernesses where no path existed.

As he was travelling thus one day, in the com-

MUNGO PARK AND THE MOSS.

pany of two shepherds, he met a band of robbers. The shepherds fled, and Park, seeing he could not escape on his broken-down horse, rode forward to meet them, in the hope that they might be elephant hunters. But their true character soon became apparent, for they proceeded to plunder him of everything, even his poor horse, threatening to kill him if he made the least resistance. All they left him was a shirt and a pair of trousers, and as they were going away they flung his hat to him, which was very fortunate, as he had hidden his notes in the crown of it.

Park narrates: "After they were gone, I sat for some time looking around me in amazement and terror. I saw myself in the midst of a vast wilderness, in the depth of the rainy season, naked and alone, surrounded by savage animals, and still more savage men. I was five hundred miles from the nearest European settlement. I considered my fate as certain, and that I had no alternative but to lie down and perish. The influence of religion, however, aided and supported me. I was indeed a stranger in a strange land, yet I was still under the protecting eye of that Providence who had condescended to call himself the stranger's Friend. At this moment, painful as my reflections were, the extraordinary beauty of a small moss caught my eye. Can that Being, thought I, who planted, watered, and brought to perfection, in this obscure part of the world, a thing which appears of so small importance, look with unconcern upon the situation and sufferings of creatures formed after his own image? Surely not! Reflections like these would

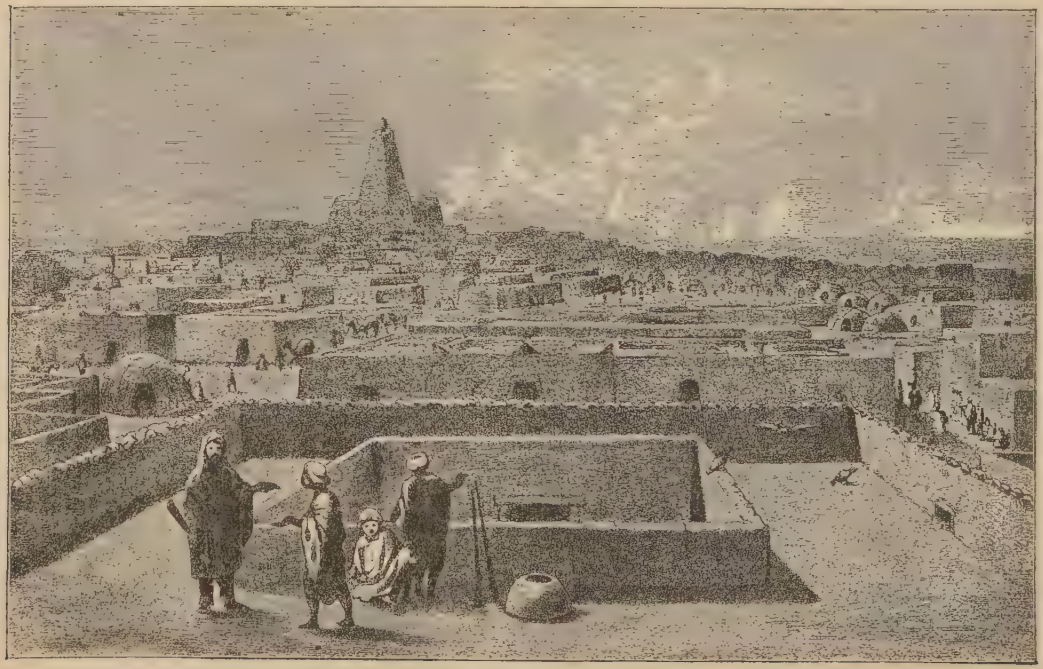
not allow me to despair. I started up, and disregarding both hunger and fatigue, travelled forwards, assured that relief was at hand, and was not disappointed."

He arrived in a short time at a small village, where he was relieved. A few days afterwards he recovered his horse and some of his clothes, through the agency of a friendly chief.

Battling with rain, fatigue, hunger, and disease, he struggled on, until he reached a town called Kamalia. He was taken to the house of a slave merchant named Karfa, who proved himself a good Samaritan. He treated Park with the greatest kindness, and although there was scarcity in the land, supplied him plentifully with food. He induced Park to stay with him until the end of the rainy season, when he himself was going to the Gambia with slaves. Here, Park's constitution completely broken down by hardship, he was attacked by fever, and his life was in danger for five weeks.

At last the long-wished-for day of departure arrived. Karfa had collected his slaves, and, accompanied by our traveller, the caravan set out for the Gambia. Park travelled on foot, for he had finally to abandon his horse. He presented a strange appearance. Dressed in the costume of the country—for his own clothes had long been worn out—his skin burned brown by the sun, and wearing a long beard, he was generally mistaken by the negroes for a Moor. He was not sorry for this, as he received more respect and attention from the negroes than if they had known he was a poor white man.

Park's troubles were now virtually over, for al-



TIMBUCTOO.

though the party met with some slight misadventures by the way, they in due time arrived safely at Pisania, from which Park had been absent nineteen months. He was received by his friends there with great joy and satisfaction, as one risen from the dead. Park's benefactor, Karfa, was not forgotten: he received such a liberal reward that he was overpowered by the unexpected token of gratitude, and he would often say to Park, "My journey has indeed been prosperous!"

Park was welcomed with enthusiasm on his arrival in England, where he immediately published an account of his travels, which to this day is read by young and old. Unaffected, however, by the honours thrust upon him, he retired to the little town of Peebles, where he married and settled down as a surgeon. But he could not rest. He said he would rather brave Africa and all its horrors than wear his life out riding about the hills as a country surgeon.

Accordingly, in 1805, he set out on another expedition to the Niger, at the expense of Government. This time he was better prepared. His party consisted of thirty-six Europeans and nine negroes; but misfortune followed the expedition from the beginning. From various causes the start from Pisania was delayed until nearly the commencement of the rainy season. Fever and death overtook one member of the party after another, until, on reaching the Niger, only seven were left.

Embarking on the river in a native canoe, they proceeded downwards, with the intention of following it to its mouth, but were harassed by con-

stant attacks from the natives. In this manner they proceeded, passing the famous city of Timbuctoo, until they reached a place called Boossa, where the river rushes through a narrow cleft of rock. Here they found the natives posted to stop their progress. Park and his followers were fiercely attacked, and after fighting for some time they were unable any longer to defend themselves. Seeing this, the whole party, except a negro, jumped into the river in an endeavour to escape to land, but they were all drowned in the turbulent stream. The negro was the only one who escaped to tell the tale of the last hours of Mungo Park.

Thus perished this indomitable explorer, who, through dangers and difficulties that would have daunted almost any man, pushed his way literally alone into the heart of an utterly unknown region. He was the first white man to behold the great Niger, on which he afterwards lost his life, after tracing its course for a thousand miles, or five hundred miles from its mouth.

But he did not perish in vain. He opened the door of Northern Africa to future explorers, a host of whom eagerly followed in his footsteps; although, from the multitude of difficulties in the way, it was twenty-five years afterwards before his great work was completed, and the Niger navigated to the sea.

ALEXANDER VON HUMBOLDT.

AT a time when the din of war resounded throughout Europe, two men were speeding their way across the Atlantic, on a mission of science and peace. One of these, although only thirty years of age, had already become well known in the scientific world—his name was Alexander von Humboldt. He was born in the year 1769, and had from his boyhood devoted himself to the study of natural science.

He was not content with this, however. He desired to become a traveller. When a boy he had read of the exploits of great travellers, and the dream of his young life was to go out into the world and emulate them. As he grew older this dream became a fixed ambition, and after many disappointments the ambition was at last realized. On the 5th of June 1799, he sailed from Corunna for Venezuela, accompanied by Aimé Bonpland, a French naturalist. His intention was to explore the almost unknown northern regions of the South American continent.

On the 16th of July, Humboldt and Bonpland

arrived at Cumana, in Venezuela, which country, with nearly the whole of South America except Brazil, then belonged to Spain. Here they found themselves in the midst of a new life, with new manners and customs. The hospitality of the Spaniards was unbounded, and the scientists were welcomed everywhere.

They readily adapted themselves to circumstances, even in the manner of bathing. On a fine moonlight night, a family, accompanied by any stranger they happened to entertain, would go down to the river, in which chairs were placed. The party, lightly clad, would seat themselves in the almost warm water, and spend an hour or two in talking and smoking. Dolphins, however, came up the river at night in great numbers, and sometimes frightened these pleasant little parties by darting into the middle of them and spouting water.

Four months were passed in this very agreeable fashion, and in making scientific excursions into the surrounding country. But the travellers had one disagreeable experience. One afternoon—the day had been sultry—the sky grew gradually black, and several peals of thunder were heard. Suddenly, at the moment of a louder peal than usual, both Humboldt and Bonpland were almost thrown to the ground by a smart shock of earthquake. This was followed in a few seconds by another. The people ran distractedly about the streets, and huddled together in terror in the public square. But little damage was done, and the populace soon recovered their equanimity.

In November the travellers went to Caracas,

LLANOS OF THE ORINOCO.

where they spent two months in exploring the neighbourhood. They then started on their first great journey, in which they were to travel southwards to explore the upper waters of the Orinoco, through a region almost unknown.

For some time the way led them through picturesque mountains and fertile valleys, teeming with tropical life and vegetation. But soon a different aspect of nature presented itself. On leaving the highlands, they came out upon the plains of the Orinoco. These plains are the most level in the world, and are in places sterile and devoid of vegetation. As far as the eye can reach, nothing is to be seen but a dreary waste, with absolutely nothing to break the dismal surface. Over the llanos, as the plains are called, the travellers rode, usually by night, for by day the tropical sun beat down with overpowering heat.

In a few days they reached the town of Calabozo, situated in the midst of the llanos. While here, Humboldt engaged some Indians to catch live electric eels, which abounded in a river in the vicinity, and on which he wished to make experiments. As the Indians dreaded the electric shocks which they would receive in handling the eels, they employed horses for the purpose of catching them.

About thirty wild horses were driven into the stream, and the noise they made soon excited the eels to attack them. The terrified horses tried to leave the water, but were driven back by the Indians with shouts and yells. The eels, bewildered by the turmoil, again and again discharged their

electric batteries into the maddened horses. By these frequent discharges, however, the eels became enfeebled, and floated on the surface of the water, when they were easily and with safety pulled out.

Humboldt and Bonpland left Calabozo and resumed their march across the llanos, and in a week reached the Rio Apure, a tributary of the Orinoco. They embarked in a canoe manned by Indians, and proceeded down the stream.

When they came to the mouth of the Apure, what appeared to be an immense lake, with white-topped waves, stretched before them. They had reached the Orinoco, which was here six thousand feet broad. The travellers launched out upon the waters of the great river, and with their Indian guides ascended the stream.

They seemed to have entered an enchanted land. The ever-changing scenery of forest, savannah, and swamp delighted the explorers. Beautiful plants and flowers flourished in tropical profusion, while birds of brilliant plumage fluttered about them. But deadly dangers lurked in this earthly paradise. Crocodiles and jaguars infested the rivers and forests, while the swamps abounded in vipers and venomous insects.

Many tribes of Indians were met with, but these were inoffensive and good-natured. These Indians had one extravagant custom, of which they were very fond—that of painting themselves. At one place this custom was carried to such an extreme that a man would work hard for a fortnight and only earn enough to buy paint to paint himself red.

Longitude West from Greenwich.
CARIBBEAN SEA
HUMBOLDT'S ROUTE ON THE ORINOCO.
St Lucia
St Vincent
Cariaco
Grenada
Buen Ayre
Blanquilla
Los Roques
Orchila
Margarita
Testigos
Tobago
Dragon's Mouth
Cabello
Tortuga
Caracas
Cumana
Trinidad
Gof Paria
Puerto Cabello
La Victoria
Puruey
Llanos of Caracas
Llanos of Barcelona
Llanos of Cumana
ORINOCO
Mouth of the Orinoco
Mouths of the Orinoco
Cala bozo
Concepcion del Pao
S. Rafael
Zacupana
Orinoco
Angostura
Caroni
R. Caroni
R. Apure
R. Guarico
Cabruta
S. Fernando de Apure
S. Pedro
R. Capanaparo
R. Meta
C. Baraguan
S. Borja
R. Iuruani
Cura
C. Unicare
Atures
R. Ventuari
S. Jose
S. Rinocote
Sierra Parime
S. Barbara
S. Rosa
R. Uraricuera
S. Isabel
R. Branco
R. Mocajahi
S. Balthasar
Esmeralda
Maroa
Davipe
Casiquiare
Mandavaca
S. Carlos
R. Cababuri
R. Javari
R. Padauiri
R. Demeneri
R. Cuntinamo
R. Amazon
S. Felipe
S. Anna
Equator

The travellers ascended the Orinoco for more than three hundred miles, and entered a tributary called the Rio Temi. Here the country was flat, and the river had in places overflowed its banks, submerging the forests. To avoid the many turns of the river, the Indians made short cuts through the trees. A most strange sight was to see the fresh water dolphins, frightened by the canoe, dash across the forest, spouting compressed air and water.

The explorers ascended the Temi to the mission station of Javita, where they left the basin of the Orinoco to enter that of the Amazon. The canoe was carried overland for a distance of about thirty miles and launched in the Rio Negro, a tributary of the latter river. They descended as far as the fort of San Carlos, on the frontier of Brazil, where their forward journey ended.

Humboldt now turned back to explore a river called the Cassiquiari, which flowed *out of* the Rio Negro, some distance above San Carlos. This river was said to be a water channel between the Rio Negro and the Orinoco, thus joining the latter with the Amazon. They found the Cassiquiari a truly tropical river. The banks were composed of a dense and tangled mass of vegetation, and the air was thick with malarial vapours. The mosquitoes, too, seemed to the travellers the largest and fiercest they had ever seen, and they were tormented by them night and day. On the 21st of May they triumphantly re-entered the Orinoco, and thus proved that a navigable channel existed between the two great rivers.

For seven hundred and fifty miles the explorers

descended the Orinoco until they reached Augestura. In two and a half months they had navigated five hundred leagues of river, through a region almost unexplored. They made many discoveries of great scientific importance, and made known many new species of plants and animals. It was the most complete survey of any region that had hitherto been undertaken.

From Augestura, Humboldt and Bonpland travelled overland to Cumana, where they were gladly welcomed back by their many friends. After a visit to the island of Cuba, the travellers returned to the mainland. Their purpose was now to travel southwards through Colombia and Ecuador to Peru, by the eastern slopes of the Cordilleras. They started from Cartagena and travelled up the valley of the Magdalena until they reached the mountains.

Their road now led them alternately through almost impenetrable forests and along rocky tracks on the bare and precipitous mountain side. Innumerable torrents and cataracts had to be crossed, some of them with the greatest difficulty. They would not, however, have been true explorers had they grumbled at these difficulties. They surmounted them safely, and arrived at Quito, the capital of Ecuador, on 6th January 1802. Quito, although almost under the equator, enjoys a temperate and healthy climate. This is owing to its situation in the midst of the mountains, at the great height of nine thousand five hundred feet—more than double the height of Ben Nevis.

While at Quito the travellers ascended many mountains in the vicinity, and among them Coto-

CHIMBORAZO.

paxi and Chimborazo. Cotopaxi, one of the most tremendous volcanoes on the earth's surface, is, from its frequent eruptions, the terror of the surrounding country. Humboldt and Bonpland were not able to ascend much farther than the snow line, for a perpendicular wall of rock, which they were unable to scale, surrounded the crater.

They next tried Chimborazo, the third highest mountain in South America, twenty-one thousand four hundred feet high. They ascended easily enough until they reached the snow. Here they saw a narrow ridge of rock, which apparently led to the summit, and the only way by which it could be approached. This path became narrower and steeper as they climbed up, and at last the guides became frightened and refused to go farther. The two enthusiasts, not to be daunted, proceeded alone.

The ridge in places was not more than eight inches broad, on one hand being a steep declivity covered with ice, and on the other a dreadful chasm a thousand feet deep. The rock was soft, and frequently broke away, and they had sometimes to crawl on their hands and knees. They began to suffer, too, from the extreme rarefaction of the air, and they breathed with difficulty. Thus they proceeded, enveloped in a mist which became denser as they ascended.

"Finally, the belts of cloud parted, and they saw on a sudden the vast dome of Chimborazo. It seemed near them—so near that in a few minutes they might reach it. They hurried on. All at once the path was stopped by a chasm sixty feet broad. There was no way by which they could

cross it; the difficulty was insurmountable. If they could have but crossed that chasm!" They had reached to within two thousand three hundred feet of the summit, but, disappointed, had to descend. They were the first, however, not only to reach such an altitude in Chimborazo, but on any other mountain in the world.

Humboldt and Bonpland remained in Quito nine months, and then started for Peru. They had now penetrated into the country of the ancient Peruvians, and everywhere ruined monuments of their departed greatness met the eye. That which impressed the travellers most was the wonderful roads which this remarkable people had constructed. These roads were paved with smooth blocks of stone, like those of the ancient Romans, and were carried across valleys and over mountains with the greatest skill.

In former times they extended to the length and breadth of the land. Quito and Cuzco, the ancient capital of the Incas, were connected by one of these roads, nearly one thousand five hundred miles in length. The conquering Spaniards, however, had allowed them to fall into decay, or had wantonly destroyed them. At one place, the travellers had to scramble, to the danger of their necks and limbs, along a wretched mountain track, while above them, on the hillside, ran the remains of a splendid Peruvian road.

The travellers presently descended into the valley of the Upper Amazon, and explored the head waters of that mighty river, here only three hundred feet broad. At its mouth its breadth is six

miles! Still wending their way among the mountains, they came to Caxamarca, a pleasant city standing nearly as high as Quito.

It was here that the Spaniards assassinated Atahualpa, the last of the Inca emperors;* and, living in poverty and obscurity, Humboldt here found his lineal descendant. Soon after leaving Caxamarca, the travellers were gratified by their first sight of the Pacific, which they beheld from the passes of the Andes. They descended to the coast at Truxillo, and proceeded to Lima, their destination.

Humboldt and Bonpland now determined to return to Mexico, to see something of that little known country. They therefore embarked on a Spanish man-of-war and sailed northwards. As they sailed up the coast they both saw and heard their old friend Cotopaxi in violent eruption. This was one of the most disastrous that had ever taken place. The enormous bed of snow which covered the upper part of the mountain was melted in one night, and the flood, rushing downwards, swept everything before it.

The travellers landed at Acapulco in March 1803, and proceeded to the capital, where they remained a year. During this time Humboldt visited and examined the silver mines in the vicinity of the city of Mexico, and studied the geological formation of the country. As in Peru, the travellers were much interested in the numerous re-

* The Incas were the ruling class in Peru before the advent of the Spaniards. They comprised the emperor, princes, and nobles, and were a distinct race from the aboriginal Peruvians or Indians. They are said to have conquered the country in the tenth or eleventh century, and to have come from some unknown country beyond the ocean.

mains of an ancient nation. The Aztecs, or ancient Mexicans, like the Peruvians, had attained to a remarkable degree of civilization, very like the ancient civilization of the East. But a remarkable circumstance was that these two nations, although so near, were totally unaware of each other's existence.

That which interested Humboldt most, however, was the remarkable volcano of Jorullo, which, until he described it, was quite unknown. This volcano was thrown up *in a single night*—that of the 28th of September 1759—to a height of one thousand five hundred feet. Where it appeared, there had previously existed a smiling plain, covered with plantations. These were entirely destroyed, and in their place reigned chaos, ruin, and desolation.

Humboldt and Bonpland brought their explorations to a close; and after another visit to Cuba, they sailed for Philadelphia. They bade adieu to the New World on the 9th of June 1804, set sail for home, and arrived in the Garonne in August.

"From time to time, during Humboldt's five years' absence, rumours of his travels were noised abroad, and he was much talked about, not only by scientific men, but by the world at large. Battles had been fought, empires had risen and fallen, yet he was not forgotten. He returned to find himself famous."

For nearly twenty-five years Humboldt's life was uneventful. He occupied himself almost wholly in giving to the world the fruits of his travels and scientific researches. In 1829 he made a journey in Central Asia, as far as the Altai Mountains and the frontiers of Mongolia. During this journey he

made a remarkable discovery of diamonds in the Ural Mountains. On examining the mineral ore of the mountains, he was convinced of the existence of diamonds Search was made, and sure enough they were found.

For nearly thirty years after his Asiatic journey, Humboldt was quietly engaged in literary and scientific pursuits, esteemed and honoured by the world. He bore many honours. He was made a baron, and a chamberlain of the king of Prussia. He was frequently employed on political and confidential missions; in fact, he enjoyed the fullest confidence and friendship of his king.

"He died on the 6th of May 1859, at half-past two o'clock in the afternoon. A few minutes before his death the blinds were opened, and the full blaze of the sun poured into the chamber. 'How grand these rays,' he murmured; 'they seem to beckon earth to heaven.' He closed his eyes like a wearied child, and slept the long, long sleep."

It would be difficult to estimate the services which Humboldt has rendered to the world. He was one of the first to make the study of natural science popular; the study of it had, up to his time, been reserved for the few. He was one of the first, also, to lift natural science out of its old and fossilized state, and to reanimate it with the light of modern research. But perhaps his most important service of all was to originate those journeys of scientific research which have made the nineteenth century famous, and which have done so much to make us acquainted with the animate and inanimate nature of the world we live in.

SIR JOHN FRANKLIN.

ARCTIC exploration, up to the end of the eighteenth century, had for its sole object the discovery of a north-east or north-west passage to India and the East. All attempts to penetrate the North-East Passage failed until the year 1879, when Professor Nordenskjöld sailed from Europe to Japan along the north coast of Asia and through Behring Strait. But it is in the discovery of the North-West Passage that the most heroic efforts have been made, which have encircled these desolate regions with an immortal halo of romance.

If we take the map of North America, and draw a line from Cape Wolstenholme, at the entrance to Hudson Bay, across the continent to Vancouver Island, we shall have a rough idea of what was considered the northern limit of the mainland of America up to the time of Captain Cook. We cannot wonder, therefore, at the persistent efforts of our forefathers to find the passage which they supposed must exist, leading from the Atlantic to the Pacific. All they thought they had to do was

PARRY WINTERING AT MELVILLE ISLAND.

to find and double the most northerly cape, and then sail gaily into the South Sea.

When Hudson doubled Cape Wolstenholme and entered Hudson Bay, he no doubt thought he had solved the problem, and had reached the Pacific. Explorers for a century and a half afterwards thought likewise, and, with few exceptions, groped blindly about the bay, in the vain endeavour to find the western outlet.

In 1778 Captain Cook dispelled this illusion. He proved that the western coast of America was continuous as far at least as Icy Cape, on the north coast of Alaska. There was thus a vast peninsula of solid land to be circumnavigated before the North-West Passage could be accomplished. From the impenetrable barrier of ice which stopped his progress, Cook showed that the passage, if it did exist, must be practically useless.

But such is the indomitable spirit of our British navigators, that they determined if they could not discover the North-West Passage for the sake of profit, they would do it for the sake of honour and glory. It is in the nineteenth century that the Arctic Regions have been most systematically and energetically attacked.

A strange circumstance led to the renewal of Arctic enterprise. About the year 1816, most of the vast barrier of ice, seemingly as firmly fixed as the rock itself, which guarded the western coast of old Greenland, broke away, and floated down into the Atlantic. This was looked upon as a sign of a general break-up of the ice in the Arctic Regions, and immediate advantage was taken of the circumstance.

In 1818 two expeditions were fitted out. The principal of these was under the command of Captain (afterwards Sir John) Ross, for the purpose of finding the North-West Passage. Ross sailed up Baffin Bay, and reached the entrance of Lancaster Sound. He thought he had discovered the passage, and sailed in, but was presently brought up by an appearance of mountains, which stretched across the sound.

It was afterwards ascertained that no such mountains existed. Captain Parry, on a future occasion, sailed over them! Ross returned and explored the coasts of Baffin Land, and then sailed for England. The other expedition, under Captain Buchan, sailed in the direction of Spitzbergen, but on reaching that place was compelled to return, owing to the immense number of icebergs, which made the navigation dangerous. This voyage was principally noteworthy because Buchan was accompanied by Lieutenant Franklin, of whom we shall have more to say.

Between the years 1819 and 1828, Captain Parry, who has added more to the geography of the Arctic Regions than any other navigator, made four voyages to these regions. In the first, the most important, he continued the discoveries of Ross. He penetrated Lancaster and Barrow Sounds, and wintered on the southern coast of Melville Island. He discovered many islands and channels, the principal of which are Cornwallis, Bathurst, and Melville Islands, forming a group named after their intrepid discoverer; Banks Land and North Somerset, and Prince Regent and Wellington Inlets.

ROSS AND HIS CREW TRYING TO REACH THE SEA.

In 1829, Captain Ross again made a voyage to discover the North-West Passage. He forced his way through Lancaster Sound, Prince Regent Inlet, and discovered the peninsula called Boothia Felix. He also discovered King William Land, which was afterwards ascertained to be an island. Around this island, as we shall afterwards see, cling memories the most tragic of all connected with the Arctic Regions. Ross was frozen in at Boothia for four years, the longest period during which any navigator has been detained in these icy regions. During that time many journeys were undertaken, which added much to the geography of the Arctic. The most important discovery, however, was that of the magnetic pole, which is situated on the western side of Boothia.

We now come to Sir John Franklin, the most famous of all Arctic explorers. He was the first to find the long-sought but fatal passage. His tragic fate, and that of his brave companions, mark an epoch in the annals of Arctic discovery.

John Franklin was born at Spilsby, in Lincolnshire, on the 16th April 1786, and was the youngest son in a family of twelve. He was intended for the church, but on leaving Louth Grammar School he resolved to go to sea. In order to disgust him with a sea life, his father sent him on a voyage to Lisbon; but this only made him more determined. He was therefore entered as a midshipman on board the *Polyphemus* in 1800; and the very next year, when he was but fifteen years old, his ship led the van at the desperate battle of Copenhagen. Two

months afterwards he was transferred to the discovery ship, *Investigator*, commanded by his relative, the celebrated Captain Flinders, who was ordered out to survey the coasts of Australia.

Young Franklin was absent for three years on this voyage, during which the strait which separates Van Diemen's Land from the mainland was discovered. It was in this voyage, too, that Franklin acquired the skill in surveying and love of discovery which was to make him famous in after years. We next find him on board the *Bellerophon* as signal midshipman at the battle of Trafalgar in 1805. As he stood on the poop and read out the signal, "England expects every man to do his duty," did he dream how well he himself should do his duty, and, like Nelson, die in the hour of victory?

When the war with America broke out in 1812, Franklin had risen to the rank of lieutenant. In the disastrous repulse at New Orleans, he distinguished himself by the capture of an enemy's gunboat, and for his gallantry was promoted to the rank of first lieutenant. For six years his life was uneventful, but in 1818 he accompanied Captain Buchan as second in command to Spitzbergen. This was Franklin's first voyage to the Arctic, and it brought his many qualifications as an able Arctic explorer to the notice of the authorities.

His aptitude for such work was speedily put to the test, for in the next year, 1819, he was entrusted with the command of an expedition to explore the northern coasts of North America. The same year, Captain Parry sailed on his first Arctic voyage; and it was intended that the two com-

manders should work towards each other, and eventually meet. Franklin was accompanied by Dr. (afterwards Sir John) Richardson, George Back (afterwards Sir George), and Robert Hood, two naval officers, and John Hepburn, a stanch and faithful seaman.

The party sailed from Gravesend, and landed at York Factory, Hudson Bay, in the end of August. Here they were cordially received by the governor and officers of the Hudson Bay Company, and were offered every assistance. The first stage of the journey was to Cumberland House, a trading post of the company on the Saskatchewan River.

After much toilsome navigation of the rivers and lakes which abound in the country, Cumberland House was reached on 23rd October. Winter had now commenced, but Franklin was anxious to push on to Fort Chipewyan, on Lake Athabasca, in order to engage hunters and guides for the following summer. He therefore left Richardson and Hood behind, to follow in the spring, and set out with Back and Hepburn in dog-sledges over the winter snow. Chipewyan was reached on 26th March 1820, a journey from York Factory of more than eight hundred and fifty miles.

Franklin found provisions scarce, and sent word to Richardson to bring with him all he could collect; but when he rejoined Franklin in July, he had almost none. Thus, at the very outset, Franklin was harassed by a want of provisions, ominous of coming hardship.

Accompanied by sixteen Canadian *voyageurs*, Franklin and his party set out in July for the

Great Slave Lake, where they were joined by some Indian guides and hunters. They pushed on, and on the 20th of August reached a point south of the Coppermine River, five hundred and fifty miles north of Fort Chipewyan, where they pitched their winter encampment, which was named Fort Enterprise. Here they built a house, and made other preparations to withstand the intense cold, for although they were south of the Arctic Circle, the winter was Arctic in its severity.

Winter settled down on them with all its gloom and rigour, and the sun was only visible for three hours every day. The thermometer in the house sank on one occasion to 59° below zero, yet the Indians called it a warm winter! But it is a providential circumstance, which all Arctic travellers have noted, that so long as the air is calm, the intense cold is harmless, and no extraordinary precautions are necessary.

The trees which the adventurers had occasion to cut down for firewood were frozen to their centres, and were as hard as stone. All the axes but one were broken on these stony-hearted trees. The very fish which were caught became frozen the instant they were taken out of the water, but, strange to say, came to life again on being thawed.

Franklin was still hampered by a scarcity of provisions, although Back, to procure more, made a marvellous journey through the snow to Fort Chipewyan and back, a distance of eleven hundred miles, during which he endured great hardships. The Indians, too, were a constant source of trouble. They were incessant in their demands for presents

and provisions, and threatened to desert Franklin if they did not receive them. Had it not been that there were rival parties among them, who each counteracted the designs of the other, the expedition would have had to be abandoned, for Franklin could not proceed without them.

Spring came, and with it the first fly. We may judge how tediously the time must have passed, when the advent of this troublesome insect formed the subject of a whole day's conversation. But the fly was welcome, for it heralded the time of release. On the 14th of June 1821, Franklin left Fort Enterprise, and on the 2nd of July embarked in three birch-bark canoes on the Coppermine River. Nineteen days afterwards they reached the sea, on which no white man had before sailed.

They explored the shores of Coronation Gulf for a distance of more than six hundred miles, when Franklin was compelled to return, at a cape named Point Turnagain, by the failure of provisions. They then landed at Hood River, in Bathurst Inlet, and proceeded overland to the Coppermine River. The privations and hardships endured on this return journey are hardly to be paralleled, even in the Arctic Regions.

For many days all they had to live upon was a kind of lichen, called rock-tripe, which made them ill. When Franklin and his companions were too weak to gather it, and when the Canadians and Indians, from sullen hopelessness, refused, it was to Hepburn they owed their lives. Although as weak as the rest, he, with a noble devotion, each day gathered enough of the plant to keep life in the party.

Back was sent forward with some of the Indian hunters to Fort Enterprise, to prepare the Canadians who had been left there for the arrival of the exhausted travellers. On reaching the Coppermine River, they were all in so critical a condition that Franklin himself, with eight Canadians, pushed on to the fort to obtain help. Three of these Canadians perished on the way, and one returned exhausted to Richardson. Franklin and the survivors had to eat part of their boots to keep themselves alive.

When the fort was reached, it was deserted. Some old bones and deer-skins were found; these were softened and eaten. Two of the Canadians were sent on to the next fort for assistance, and Franklin and the other two remained, dying of starvation. At the end of three weeks Richardson and Hepburn arrived, with the intelligence that Hood was dead.

It appeared that Hood and an Indian had been left in the camp alone one day, while the others went away to hunt. When they returned, Hood was lying dead, shot through the head. There could be no doubt that the Indian was the murderer, and to save the survivors from a similar fate he was shot by Richardson.

The united party now lived on, if it could be called living. One day Hepburn shot a partridge. Franklin says, "I and my companions ravenously devoured our shares, as it was the first morsel of flesh meat any of us had tasted for thirty-one days."

Succour came at last. Back, after suffering

hardships only equalled by the rest of the party, had reached Fort Chipewyan, from which place he dispatched Indians with supplies. After a few days' delay, in which to recruit their strength, Franklin and his companions, with new life, left Fort Enterprise on the 16th of November. The worst of their hardships was over.

They eventually reached York Factory on the 14th of July 1822, and returned to England the same year. They had travelled in three years, in the wilds of North America, the enormous distance of five thousand five hundred and fifty miles. Franklin's exploit was regarded in England as that of a hero, and he was received with enthusiasm. He was promoted to the rank of post-captain, and elected a Fellow of the Royal Society.

We might reasonably have expected that Franklin, after what he had endured in the desolate far north of America, had little desire to return thither. In 1825, however, he proposed to the Government to continue his explorations of the north coast. His proposal was favourably received, and his services accepted. His tried and trusty friends, Richardson and Back, again accompanied him. The company was made up of other three officers, nineteen British seamen and marines, and a large body of Canadian *voyageurs* and Indian hunters.

The expedition had not to endure the hardships of the first journey; indeed, so complete were the arrangements, that hardship was unknown from the beginning to the end. Franklin wintered for two seasons at the Great Bear Lake, and we may still see the place, Fort Franklin, marked on the map.

In the summer of 1826, Franklin proceeded westwards from the mouth of the Mackenzie River as far as Beechey Point, near the Colville River. His progress was there stopped by the lateness of the season and persistent bad weather. In connection with the expedition, Captain Beechey sailed through Behring Strait, and worked along the coast, intending to join hands with Franklin, but was unable to get farther than Point Barrow. A distance of only one hundred and fifty miles separated the two explorers.

While Franklin explored to the westward, Dr. Richardson followed the coast eastwards from the Mackenzie to the Coppermine River. Franklin, in his first and second expeditions, had thus explored nearly the whole north coast of America, and had added to the map more than twelve hundred miles of coast-line hitherto unknown.

For this service Franklin was knighted, and received the gold medal of the Geographical Society of Paris. In 1828 he married as his second wife Jane Griffen, daughter of a man of fortune, who was to play such a prominent part in the drama of twenty years afterwards.

Franklin now returned to his old duties, and, in command of the *Rainbow*, rendered valuable aid to the Greeks in their war of independence. In 1834 he went to Tasmania as lieutenant-governor, where for nine years he devoted his energies to promote the prosperity of the colony.

Franklin had not long returned to England when another expedition to discover the North-West Passage was determined upon. The successful

voyage of Sir James Clarke Ross to the Antarctic Regions had stimulated the Government to further Arctic researches. The command was offered to Franklin, and he eagerly accepted it, although he was then sixty years of age. The First Lord of the Admiralty remarked upon his age to him one day, and questioned whether he should be allowed to go. "My lord," replied Franklin, "I am only fifty-nine."

The *Erebus* and *Terror*, Sir James Clarke Ross's two ships, were selected for the voyage. They were fitted out with small engines and screws—the first time steam was employed in Arctic exploration—and were provisioned for three years. Franklin commanded the *Erebus*, and had under him as second in command Captain Fitzjames; the *Terror* was commanded by Captain Crozier. The total number of officers and men was one hundred and thirty-eight.

The general instructions which Franklin received directed him to sail through Lancaster and Barrow Sounds until he reached longitude 98° west. He was then to penetrate southwards to the American coast, and from the mouth of Back's Great Fish River to find a passage, which he himself felt assured existed, to Coronation Gulf, and thence on to Behring Strait. This was the great North-West Passage, or one of them, for another was afterwards discovered. Franklin followed his instructions to the letter, and found it.

On the 19th of May 1845, the *Erebus* and *Terror*, accompanied by a tender laden with additional stores, sailed from Greenhithe, on the

Thames. Little did Franklin, his officers, and his men think, as they cheerily bade farewell to their friends and homes, that *not one* should ever return.

Without any noteworthy incident, the little fleet reached Disco, on the west coast of Greenland, on the 4th of July. Here the tender discharged her cargo, leaving the expedition with provisions for three years. The tender was sent back to England, with many letters from the officers and men, filled with bright anticipations for the future. On the 26th of the same month—that is, July—in the year 1845, two months and seven days after leaving the Thames, the *Erebus* and *Terror* were seen by a whaler in Melville Bay. They were moored to an iceberg, waiting an opportunity to get through the ice which extends down the middle of Baffin Bay. The captain of the whaler was invited on board the *Erebus* by Franklin to dine with him; but a breeze sprang up, and the ships parted company.

As a mere matter of course, when he reached home the whaler captain reported having spoken the *Erebus* and *Terror*. He little thought, the friends of the absent ones little thought, the world little thought, that that was the last that would be seen, except by a few wandering Eskimos, of the Franklin Expedition.

A year and a half after the Franklin Expedition sailed, Sir John Ross wrote to the Admiralty and stated his opinion that Franklin had passed the winter of 1845–6 near the western end of Melville Island. However, neither he nor any one felt any uneasiness. The end of 1847 came, nearly

DISCO ISLAND, GREENLAND.

two and a half years after the expedition had last been heard of, and there were no tidings. Serious fears were now entertained that some disaster had befallen Franklin. Search expeditions were prepared, and between 1847 and 1850 no less than ten were sent out. One of these was commanded by Franklin's old and faithful friend Richardson.

When these returned without news of the missing expedition, the most intense anxiety was felt. The Government offered a reward of £20,000 to any who should rescue the crews of the *Erebus* and *Terror*, and £10,000 to any who should ascertain their fate. In 1850–1, five expeditions were sent out, the veteran Sir John Ross in command of one of them, and Captain M'Clure of another.

Hope was now almost abandoned, but between 1851 and 1855 nineteen search expeditions overran the Arctic Regions. Long before the latter year it was felt that there could be no hope, and the searchers now expected to find only traces of some dire disaster. These, alas, were not wanting; but they were few, and threw no light on the fate of the expedition. In 1857 Lady Franklin, who, from first to last, spent nearly the whole of her private fortune in her noble efforts to trace her lost husband, fitted out the steam yacht *Fox*, under the command of Captain M'Clintock, to make one more search.

Thirty-five expeditions in all, at a cost of about a million pounds, were sent out, some by the British Government, some by the United States, and some by private enterprise. Bit by bit, among all these expeditions, the mystery was cleared up, as much

as it can be cleared, and the awful tragedy revealed in all its horror. To Captain M'Clintock was reserved the sad satisfaction of finally ascertaining the fate of Franklin and his companions. Lieutenant Schwatka of the United States Army, in 1879, while finding a few additional traces, only confirmed M'Clintock's discoveries. The following is a slender narrative, made up from the relics and records found, as well as from the accounts of the Eskimos, of Franklin's progress and fate.

Franklin succeeded in getting through Lancaster Sound, and entered Barrow Strait, but was stopped by drift ice. As this drift ice had a momentous influence on the fate of the expedition, it is necessary to explain what it is. There is a constant current from the colder waters of the unknown Arctic Ocean in the west to the warmer waters of Baffin Bay.

In summer this current carries with it immense quantities of drift or pack ice, which makes its way along the north of the Parry Islands, and through Banks Strait, Melville Sound, and Lancaster Sound, into the bay. Here it unites in a drift known as the middle ice, and floats down the centre of Baffin Bay towards the Atlantic. It will be remembered that it was while waiting to get through this middle ice that Franklin was last seen.

When he found himself stopped by the drift ice, he turned and sailed up Wellington Channel, in the hope of finding a passage to the northwards of the Parry Islands. He ascended as far as the northern outlet, where he was again stopped by the drift ice; and he returned by the strait between

DISCOVERY OF THE CAIRN AT POINT VICTORY BY M'CLINTOCK.

Bathurst and Cornwallis Islands. The lateness of the season now warned him to seek winter quarters, and he accordingly made for Beechey Island, a small promontory at the south-west corner of North Devon.

An encampment was formed on shore, and a storehouse and blacksmith's forge erected. An observatory was also built, and a garden laid out, in which to preserve the plants collected in the locality. A shooting-gallery even was made under the cliffs, where empty bottles and meat tins formed the targets. During winter sledge parties were sent out in various directions; the tracks made by the runners were clearly visible in the hard snow six years afterwards. There was a gloomy side to the general cheerfulness which must have prevailed, however; three men died—the first deaths in the expedition.

Spring came, and the ice broke up with unexpected suddenness. Almost without an hour's warning the men were hurried on board the ships, and the camp left but half-dismantled. Even a pair of gloves, which had been spread out to dry, and in which were placed stones to prevent their being blown away, were forgotten by their owner.

Franklin threaded his way westwards through the drifting ice as far as Cape Walker, at the entrance of Peel Sound. He entered the sound and sailed southwards through comparatively sheltered waters. Up to this time, Franklin's progress was all that he could have desired, and doubtless his hopes of success were high. He had only to reach Cape Herschel, on the south coast of King William

Land, *and the North-West Passage would be discovered!* The northern coast of America had already been explored eastwards beyond Back's Great Fish River, and Cape Herschel had been discovered in 1839.

No sooner, however, did Franklin emerge from the sheltered channel than he again became involved in the fatal drift ice. This ice, floating down from Melville Sound through M'Clintock Channel, then unknown, impinged upon the west coast of King William Land, and there became fixed in impassable masses. Through this ice he struggled for some time in the endeavour to reach Victoria Strait, between Victoria Land and King William Land.

On the 12th of September 1846 the ships became beset and immovable twenty miles north-west of Cape Felix, the northern extremity of King William Land. Had Franklin known that King William Land was an island, which was only afterwards ascertained, the expedition might have been saved. A channel existed on the *eastern* side of the island which led directly to the mouth of the Great Fish River, and down which he might have sailed in safety.

For the second winter Franklin was frozen in. Nothing of great moment happened. He would still be hopeful, for only one hundred and thirty miles by sea separated him from Cape Herschel. On the 24th of May 1847 a small party under Lieutenant Gore started on an expedition to the island. They proceeded southwards along the shore, and passed a headland named Point Victory, where

they left a short record in a cairn of the proceedings of the expedition up to that date. The record ended with, "Sir John Franklin commands the expedition. All well."

It is very probable that the object of the expedition was to reach Cape Herschel, a distance of only seventy or eighty miles by land. But, alas, within a very short period of that "all well" poor Franklin died. "Sir John Franklin died on the 11th June 1847." That is all we know. Let us hope he lived long enough to know that the North-West Passage had been gained, and that victory was his. Otherwise, we cannot be sorry he died when he did, as he was thus spared the horrors which were to come.

Captain Crozier, being senior officer, now took the command. The spring of 1847 did not release them. Summer, autumn, winter passed, and they were still in the same position. True, the ships had drifted down Victoria Channel about thirty miles with the pack ice, but they were beset all the year.

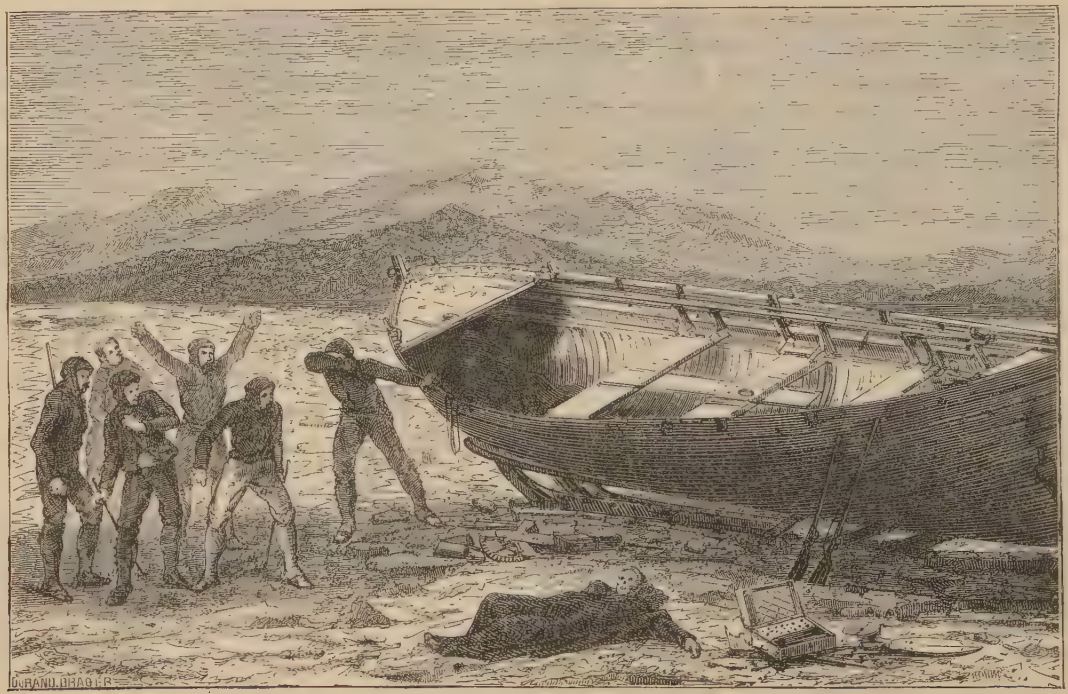
Serious thoughts must now have occupied the minds of all. Provisions would soon fail, for a great part of the preserved fresh meat had been found rotten. They had certainly enough salt meat, but men cannot live on salt meat alone, as it produces scurvy. And, indeed, scurvy began to attack the men, and some died. In the spring of 1848 it was resolved, as there seemed no prospect of the ships getting free, to abandon them while there were yet enough fresh provisions left to enable their crews to do so, and to make for the nearest Hudson Bay station.

Accordingly, on the 22nd April 1848, the officers and crews, to the number of one hundred and five, left the ships with several boats mounted on sledges, and landed at Point Victory. Up to this time nine officers, of whom Gore was one, and fifteen men had died, probably from scurvy. Captain Crozier found the record left by Gore, and wrote the above information round the margin of it, and added that they would "start on to-morrow, 26th, for Back's Fish River."

This is all we know from the records of the Franklin Expedition. What follows is mainly from the traces and relics, and the accounts of Eskimos, collected by M'Clintock ten years afterwards, and by Lieutenant Schwatka in 1879.

When the party set out they had no fear of starvation, for they took with them an enormous quantity of articles which could have been of no use on their journey. When they arrived at Point Victory, however, a three days' toilsome march over the ice, they found that they had overtaxed their strength. A great quantity of their encumbrances, which included a pile of spare clothing about four feet high, and such things as cooking stoves, a lightning conductor, and brass curtain rods, were thrown away.

They then travelled southwards along the shore, but found the journey much more difficult than they had anticipated. Weakness and disease began to assail them; now and then a man fell down and died, and was buried by his companions. At last, when they had reached the vicinity of Cape Crozier, the most westerly point of the island, a



DISCOVERY OF THE BOAT BY CAPTAIN M'CLINTOCK.

portion of the party determined to return to the ships.

They no doubt argued that they would all perish if they went on, for they were still a thousand miles from the nearest Hudson Bay station. There was still a quantity of salt provisions in the ships, and they could live on board and risk scurvy until their companions reached the station and sent back help, or until the ships got free and floated southwards. They set out upon their return, taking with them one or two boats; at least one of the officers, Lieutenant Irving, accompanied them.

The main party went on. At the head of Terror Bay, on the south coast, they left a large tent standing, full of their dead—unburied! When they reached Washington Bay, a little farther on, they met a party of Eskimos. An Eskimo said that the men looked starving, and that "*they fell down and died as they walked along.*" It is probable, however, that it was scurvy, as much as starvation, which proved so fatal. The Eskimos are in the main hospitable, and would not have allowed them to starve if they had had anything to give them; but these poor people at the best lead but a precarious existence.

Thus they struggled on in their death march, leaving a ghastly trail of dead behind them. At last they reached the coast opposite the Great Fish River. In the passage across the strait five men died, and were buried on a small island. The survivors reached a bay on the mainland, formed by Adelaide Peninsula and Point Richardson, to the west of the river. But they could go no farther.

Here, utterly worn out by starvation and disease, they lay down—and died. One officer was afterwards found lying, as if asleep, with his double-barrelled gun beside him, and his telescope strapped to his shoulders. Another man, stronger than the rest, struggled on five miles inland. He too, at last, lay down and died.

We must now follow the party which returned to the ships. They were soon compelled to abandon their boat. It was a very large and heavy one, and no doubt they were not strong enough to drag it after them. It was afterwards found by M'Clintock standing as they had left it. Round about the boat were lying numbers of loose articles, but inside was that which struck him with awe—two skeletons wrapped in fur clothing. Two guns leaned against the side, one barrel of each loaded. In the boat were also found an amazing number of small articles, such as slippers, watches, silver plate, books, soap, towels, sponge, etc., besides a great quantity of clothing, a small quantity of tea, about forty pounds of chocolate, but no other provisions.

The men ultimately reached the ships, and remained by them until the autumn, when the *Erebus*, according to the Eskimos, was crushed by the ice, and sank. The crew escaped safely to land. Whether they returned to the *Terror*, or whether they tried to follow in the footsteps of their companions, will never be known. Lieutenant Irving died, and was buried near Point Victory. His bones were afterwards found by Lieutenant Schwatka, and conveyed to Edinburgh, to which city he belonged, and were there buried.

DISCOVERY OF THE REMAINS OF LIEUTENANT IRVING.

The *Terror* broke free from the ice, and, with several of the men on board her, drifted down Victoria Strait until she was beset about ten miles from the north-west point of Adelaide Peninsula. There are evidences that the men remained on board for some time, and then abandoned her. On reaching the land, they perished miserably like their companions. One unburied body and a few tins of provisions were found in the ship by the Eskimos; the ship was afterwards cast ashore and wrecked.

The narrative, from the time the united crews left the ships, is in some parts based upon conjecture; but it is all we are likely to know of the fate of the Franklin Expedition, and we must be content with it.

At Beechey Island Lady Franklin erected a tablet in memory of her husband and his brave companions. It stands there, in the Arctic solitude, amid the eternal ice, a memorial of those who perished in the noble cause of science and in the service of their country.

We have seen that, up to the hour of his death, Franklin's was a busy life. It was not, however, for his achievements alone that he was esteemed. His character was such that he exerted a powerful influence upon all he came in contact with. He was beloved by his officers and men, and in the hour of greatest danger they would have laid down their lives for him. No man more truly served his country, either in peace or war; and he died in the faithful performance of his duty, in the hour of a peaceful victory. He was regretted and mourned by his countrymen, but most of all by a noble and

loving wife, who never ceased her efforts, even when all hope was abandoned, to ascertain the fate of her lost husband. Lady Franklin died in 1875, at the age of eighty-three.

Although most of the Franklin search expeditions failed in their object, they have enormously extended our knowledge of the Arctic Regions. The map, as we see it to-day, is to a great extent the result of their discoveries, and but little has been added since.

Of all these expeditions one stands pre-eminent —the voyage of Captain M'Clure. He was sent out in 1850 to search for Franklin by Behring Strait. He succeeded in forcing his way along the north coast of America as far as longitude 125°, when he struck north-eastwards for the strait which separates Banks Land from Prince Albert Land. He almost succeeded in getting into Melville Sound, but was stopped by the ice.

He put about, circumnavigated Banks Land, and entered Melville Sound by the north. He got as far as longitude 117°, when his ship was beset, in September 1851, in Mercy Bay. She there remained until, in June 1853, M'Clure was forced to abandon her.

Just then a party from Captain Kellett's ship *Resolute*, which had entered Melville Sound from the east, appeared and relieved M'Clure and his men. The *Resolute* herself was afterwards abandoned, but the united crews ultimately reached England in safety. As M'Clure had water under him the whole way from Behring Strait to Baffin Bay.

he was thus the first to traverse the North-West Passage. Four years earlier the Franklin Expedition discovered the North-West Passage in another quarter, but this does not detract from M'Clure's great achievement. It has the misfortune to be obscured by the shadow of a great tragedy.

Since the North-West and North-East Passages have been accomplished, Arctic explorers have principally devoted their energies to trying to reach the North Pole. Among them, we can only mention the expedition of Captain Nares, sent out in 1875 by the British Government. He succeeded in forcing his ships, the *Alert* and *Discovery*, through Smith Sound as far north as latitude 82° 24′. A sledge party reached 83° 20′ 26″, the most northerly latitude hitherto attained, and only about four hundred miles from the Pole.

Dr. Nansen's famous journey across the snowy wastes of Greenland in 1882 is well known. That intrepid explorer sailed in 1893 with the design of reaching the Pole by *drifting over it* with the ice. When his ship, the *Fram*, was frozen in, Nansen and a colleague pushed on by sledge, and reached the highest latitude ever yet attained (86° 13′ 6″). In 1896 he returned, and in 1897 published his work "Farthest North."

The latest attempt to reach the Pole is that of Andrée, who set out in 1900 to reach his goal by means of a balloon. At the present time (1901) his fate is unknown.

It may be said, and no saying is more true, that he who ventures into these icy regions takes his life in his hand.

THE STORY OF AUSTRALIA.

IT is not known when Australia was first seen by European eyes, or when its existence was first ascertained. Early in the sixteenth century, parts of the north or north-west coasts were known to the Portuguese as Great Java. Cornelius Wytflict of Louvain says in 1598, "The *Australis Terra* is the most southern of all lands, and is separated from New Guinea by a narrow strait. Its shores are hitherto but little known, since, after one voyage and another, that route [to the Dutch East Indies] has been deserted; and seldom is the country visited, unless when sailors are driven there by storms."

In 1606, the Spaniard Torres sailed through the strait, or part of it, which bears his name, and he is the first of whom we have any record. About the same time, a Dutch captain sailed into the Gulf of Carpentaria, which he supposed was a part of New Guinea, and landed on its eastern shore, where many of his men were killed by the natives.

In 1616, the Dutchman Dirk Hartog landed on the west coast in Shark Bay, where an island

CAPTAIN WILLIAM DAMPIER.

there is named after him. For the next twenty-five years various Dutch navigators visited the coasts, and gradually the north, west, and part of the south coasts became known. If we look at an old map of Australia, we may see the records of these navigators in the names which they gave to the different parts, as Arnhem's Land, Endracht's Land, Edel's Land, Nuyt's Land, etc.

In 1642, Van Diemen, the governor of the Dutch East Indies, sent out Abel Jansen Tasman to make discoveries in the south. He was driven by a storm upon an unknown coast, which he called Van Diemen's Land, and which he thought was part of Australia. He sent a party on shore, but the sailors were terrified by strange noises in the woods, and Tasman himself saw beings who looked like giants. He sailed away in hot haste from the dreadful country, and, keeping to the eastwards, discovered New Zealand. Two years afterwards, he again explored part of the northern and southern shores of Australia. In consequence of its being almost wholly visited and explored by the Dutch, the name New Holland came to be applied to the island continent.

The next man of note who visited New Holland was Captain William Dampier. In 1688, during his buccaneering days, his ship was laid up and repaired at some islands, called in consequence Buccaneer's Archipelago, on the north-west coast. His description of the land led to his receiving the command, in 1699, of a small vessel to make further discoveries.

He made the coast at Shark Bay, and explored

it northwards for nine hundred miles. As this happens to be one of the most barren parts of the Australian coast, he reported the whole land to be barren and worthless. This had the effect of preventing further discovery in Australia for many years, until it was again visited by Captain Cook in 1770. He surveyed the east coast from Cape Howe to Cape York, in the course of which he landed at Botany Bay and took possession of the country in the name of George III., calling it New South Wales.

As the result of Cook's report of the country, the first settlement was formed in New Holland. The British Government considered it, on account of its distance from England, a good place for the deportation of convicts. Accordingly, in 1788, a consignment of convicts was landed at Botany Bay; but as this place was not found suitable, Port Jackson, a short distance off, was selected instead, and the latter place thenceforth became the penal settlement.

In 1795 there arrived on the Port Jackson station H.M.S. *Reliance*, on board of which were two young officers, George Bass, surgeon, and Matthew Flinders, midshipman. For a time these two amused themselves in the dreary place by making surveys of the adjacent coasts in an open boat. These surveys so pleased the governor that the young adventurers were given every facility for carrying on their operations, during which Bass sailed through the strait which bears his name, and so proved Van Diemen's Land to be an island.

When Flinders returned to England in 1800,

his charts were published, and they received both great praise and attention. The Government was so pleased with them that Flinders was entrusted with the duty of surveying the whole of the New Holland coasts. This undertaking, in which he was accompanied by Franklin, occupied him three years, during which he circumnavigated the island.

On his voyage home to England, Flinders was compelled to put in at Mauritius, owing to the unseaworthy state of his vessel. Here he was imprisoned by the French for six years, and was ultimately rescued by an English fleet. His maps and charts had meanwhile been sent to Paris, where they were published as the work of French explorers. When Flinders finally reached England, he found all his discoveries known. He immediately commenced to write an account of them, but died on the eve of its publication. When Franklin was governor of Van Diemen's Land, he caused a monument to be erected at Port Lincoln, at the entrance to Spencer Gulf, which Flinders had discovered, to the memory of his old commander.

Australia was now in the singular position of having all its coast line surveyed and mapped, while its interior, even a few miles from the coast, was totally unknown. Up to the year 1813, the Blue Mountains, a wild and rugged chain of hills which run parallel to the New South Wales coast, had presented an insurmountable barrier to the colonists. In that year, however, a successful effort to cross them was made, and a road discovered to the beautiful pasture lands beyond.

In 1817 Mr. Oxley, the surveyor general, was

sent out from Sydney to explore the unknown region to the westwards. He penetrated as far as the Lachlan River, but in following its course became involved in a vast and dismal swamp, through which he could make no headway. He thought this swamp was the margin of a great inland sea, into which the river flowed. Some time afterwards he tried to explore the Macquarie River, with the same result: it disappeared in swamps.

Other prospectors, however, were not so unsuccessful as Oxley. During the next few years the country was explored in various directions, and much fine pasture land discovered.

We now come to the first of the great Australian explorers, Captain Charles Sturt. He was sent out in 1827, with a party of convicts, to follow the track of Oxley along the Macquarie. There had been a long and exceptional drought, and it was thought that as the swamps would be dried up, Sturt's progress would be easy. When he reached the marsh, the mud was found to be baked hard, but the tall reeds with which it was thickly covered were so hard and stiff that he found it impossible to force his way through them. He turned to the west, and crossed a flat and barren plain, through which flowed a large river. He followed this river, which he named the Darling, for nearly a hundred miles, and then returned to Sydney. This journey had little result, beyond disproving Oxley's theory of an inland sea.

Sturt's next exploratory journey was in 1829, when he embarked on the Murrumbidgee, and sailing down, entered the Murray and followed it to its

mouth. When he reached Lake Alexandrina, he found his communication with the sea cut off by a great bar of sand, and was forced to row back against the stream all the way he had come. His party endured great privations from starvation and fatigue, and when they reached the settlements they were in the last stages of exhaustion. However, Sturt had explored the greatest river in Australia for a distance of more than a thousand miles.

In 1840, the settlers in the new colony of South Australia resolved to find out something of their extensive but unknown territory, and to discover an overland route to West Australia, or the Swan River Settlement, as it was then called. Edward John Eyre, afterwards Governor of Jamaica, offered to conduct the expedition, and his services were readily accepted. With a party of five Europeans and three blacks, he set out from Adelaide and struck northwards by the head of Spencer Gulf.

He soon reached Lake Torrens, which, at the time of Eyre's visit, was not a lake in the proper sense of the word, but a vast expanse of dry, encrusted salt. Almost all the lakes of Australia are of this peculiar nature: dry salt beds or salt marshes in summer, it is only in the rainy season that they contain any water. Many of the rivers which flow into these lakes are of the same nature. In winter they are full flowing streams; in summer they become for the most part dried up, or form a long string of salt marshes. Even the flowing waters of some of them are salt.

Eyre tried to cross the bed of the lake, but at every step the thin crust of salt gave way, and his

feet sank into the black, liquid mud beneath. After struggling for six miles he had to return, as progress was impossible. He endeavoured in vain to find a road to the west, and again turned northwards. Two hundred miles of barren desert were traversed, and Eyre came upon another lake, which has been named after him, of a similar character to the former. He again attempted to penetrate westwards, but was stopped in every direction by salt marshes.

All around, as far as the eye could reach, was a barren wilderness. Eyre and his party were now in serious straits for want of water; but hope revived when a winding stream, the Frome, was seen flowing into Lake Eyre from the south-east. They hastened to its brink. The water was salt! Eyre retraced his steps, and after a journey in which the party endured great sufferings, reached the head of Spencer Gulf.

Eyre now resolved to travel westwards along the shores of the Great Bight. He attempted three times to advance, but could not get beyond Streaky Bay. The same waterless desert confronted him. The governor now urged him to return, as in his opinion it was madness to persevere. But Eyre was resolute in his determination. He reduced his party to one Englishman, named Baxter, and three blacks, and again set out.

Under a burning sun, and over blistering rocks and moving sands, he forced his way, constantly tormented by the want of water, which could only be found in places few and far between. More than once they were on the point of perishing. Baxter grew despondent, and urged Eyre to return.

But the latter's indomitable spirit urged him on, until he had gone so far that to return was as dangerous as to proceed. The blacks became mutinous, and had to be constantly watched, although one of them, Eyre's own servant, proved in the end a faithful fellow.

One evening, during Eyre's temporary absence from the camp, the two blacks made an attack upon the provisions and plundered them. Baxter remonstrated with them, on which they deliberately shot him dead, and then made off. Eyre's situation was terrible; he expected every moment to be attacked. He says that ages could never efface the horrors of that single night, and that the wealth of the world would not induce him to go through a similar one. He could not dig a grave for his companion, as the ground was hard rock; so, wrapping him in his blanket, he left him in the wilderness.

Alone, except for a single native, and in constant fear of the other two, who hovered in his track, he struggled on. One day he was overjoyed to see a French whaler off the coast. The two were taken on board, where, under kindly treatment, they soon revived. After eleven days in the whaler, Eyre landed and pursued his journey under better conditions, and through a better country. When he reached Albany, in King George Sound, he was enthusiastically welcomed by the colonists. From Albany he sailed for Adelaide, where he arrived, after an absence of more than a year.

About this time the great ambition of explorers was to penetrate to the heart of the continent. Two years after Eyre's return, Captain Sturt volun-

teered to lead an expedition on the dangerous journey. He started under the auspices of the English Government, in May 1844, from the Darling River, with a party of sixteen, with sheep and bullocks and provisions for eighteen months. J. M'Douall Stuart, who afterwards traversed the continent from south to north, was one of the party.

It was the rainy season, and there was consequently at first no lack of water, yet Sturt was very cautious in his movements. His plan was to leave the party and live-stock at a watering-place, while he rode forward alone until he discovered another; he would then return, and bring on the party. Thus his progress, although tedious, was safe. The country was, however, barren, and when he reached the Stanley Range the prospect seemed hopeless. He turned to the northwards by the Gray Range, but summer was approaching, and the springs were drying up.

The heat of the summer of 1844 was exceptional, and Sturt, exposed as he was in the plains, experienced its full force. The burning sand scorched the feet of men and animals, and the rays of the sun beat down with almost overwhelming power. The position of the expedition became precarious, and water grew scarcer and scarcer, until, most fortunately, a small stream was found flowing in a rocky gully. Sturt camped, and made his headquarters on the banks of the welcome creek. Here he was forced to remain for six months, literally besieged by the heat, which at one time was 130° in the shade. Everywhere the springs and streams, except that on which they were encamped,

were dried up. An underground cavern was dug, and in this they passed the weary days, sheltered in some measure from the fiery furnace above.

The welcome rain came at length, the springs and rivers began to flow, and Sturt again set out. For some time his progress was easy, but as he advanced north, troubles again overtook him. A hilly desert lay in his path, entirely composed of red sand, the heat and glare of which was almost unendurable. Here and there were marshes and lakes, but their waters were as salt as the ocean. For some time Sturt and his companions plodded on over the fiery waste, until, on climbing to the top of a high hill, he saw spread out before him a vast stony plain, dreary and desert, reaching on all sides to the horizon.

He descended and attempted to cross this, the well-known Great Stony Desert, but the horses stumbled helplessly among the pieces of quartz and sandstone with which the plain was covered. Further progress was impossible. Sturt sat down, with his face buried in his hands, hopeless and disconsolate. He was but one hundred and fifty miles from his destination, the Tropic of Capricorn, yet he could not reach it. Meanwhile, the situation of the party was perilous in the extreme. The dry season was again at hand, and what little water there was would soon be dried up. Sadly they retraced their steps, suffering from thirst, and often in danger of being buried in the drifting sand. The headquarters were at length reached, where relief and rest were found.

Accompanied by Stuart, Sturt once more at-

tempted to reach the tropic. He took a different route, and on the way discovered a fine river called Cooper Creek. No sooner had he crossed the creek, however, than he found himself again stopped by the Stony Desert. Utterly disheartened and worn out, and with his health completely broken down, he returned to his companions. For long he lay ill, and when the party turned homewards he had to be carried. His eyesight, affected by the glare of the sand, began to fail, and when he reached home he was permanently blind.

During the next fifteen years, various explorers penetrated in the direction of the interior. Of these, we need only mention two—Ludwig Leichardt and Edward Kennedy. The former, in 1844, successfully performed the journey from Sydney to the Gulf of Carpentaria, and discovered much fine pastoral land on the way. In 1848 he again started to cross the continent from Brisbane to the west coast. He crossed the Cogoon River in safety, but neither he nor any of his party were ever afterwards heard of. Kennedy, in 1848, was sent to explore Cape York Peninsula, but he and nearly all his companions met their deaths at the hands of the natives.

In the year 1860, a sum of about £13,000 was collected in Victoria to fit out an expedition to cross the continent from south to north. It was the most complete and well-appointed that had ever been organized for the purpose of Australian discovery. Besides the two leaders, Robert O'Hara Burke and W. J. Wills, there were thirteen subordinates, and the transport consisted of twenty-eight horses,

and twenty-six Arabian camels, in charge of three Hindu drivers.

With great ceremony the imposing cavalcade started from Melbourne on the 20th of August 1860, and reached the Murrumbidgee without incident. Burke, the chief in command, although a brave and energetic man, appears to have been hasty, impulsive, and imprudent, to which latter qualities the disaster which afterwards overtook him was primarily due. At a sheep station on the Murrumbidgee, he met a man named Wright, a worthless wretch, to whom he took a sudden fancy, and to whom he gave an important command in the expedition. When Menindie, on the Darling, was reached, Burke and Wills pushed on with half the expedition, and left Wright in charge of the other half, with orders to follow slowly in their wake.

The two leaders proceeded northwards through a bare country with scanty herbage, until, on coming to fine pasture land on the banks of Cooper Creek, a depot was formed. Here they waited some time for Wright, who, however, did not turn up, until Burke in the end grew impatient, and would wait no longer. He and Wills, with two men named Gray and King, and with one horse and six camels, set out again, and left the rest of the party in charge of one of the men, named Brahe. Brahe received instructions to wait three months for Burke's return; if the latter did not make his appearance at the end of that time, Brahe was to take it for granted some disaster had befallen him, and return southwards again.

The march was rapid, but the country was good

and well-watered, and the only sufferings were from fatigue. But time sped on; half of the three months had elapsed, and the sea was not yet reached. Burke hurried on so fast that the camels, one after another, broke down, and had to be abandoned. Gray and King were also at last left behind, and Burke and Wills pressed on on foot. The sea was reached at the mouth of the Flinders River, but they had no time to do more; they turned and hastened back.

When they rejoined Gray and King, they were exhausted by hunger and fatigue; but after a short rest, the journey southwards was resumed with the camels, which had been recovered. The exertions which the little party had undergone, however, had undermined their constitutions, and Gray was the first to break down. As food was already scarce, none could be spared beyond the regular rations to sustain his strength. One evening Burke found him eating some flour and water. Seized with sudden passion at what he regarded as a theft, he fell upon the unfortunate man and beat him severely.

Provisions ran out. First a camel was killed for food, then the horse. Gray rapidly sank, and could go no farther. Burke accused him of shamming, but Wills, fully alive to the poor man's condition, had him carried for some distance. It was in vain, however; in a few days he died, and was buried in the wilderness.

At length the depot was reached. Brahe was gone! Only a small quantity of provisions was found, which Brahe had left in the—to his mind—almost impossible event of Burke's return. Brahe

EXHAUSTED BY HUNGER AND FATIGUE.

had waited a month and a half beyond the time agreed upon, when, his own provisions nearly exhausted, he was forced to return. Wright had never made his appearance. He had wasted his time at Menindie for more than three months in amusements with his friends, and Brahe only met him when half-way back to the Darling.

The situation of the three men was serious, and they lost no time in hastening southwards. They descended Cooper Creek, and then entered an absolutely barren region. One by one the camels were killed for food, until they were left without the means of transport, and destitute. Burke wished to make for the nearest station in the direction of Adelaide. Wills pointed out the folly of traversing an unknown country in their condition, while the road to Menindie, although longer, was, with its watering-places, known to them.

Burke's obstinacy prevailed, and they set out, only to return to the creek after many miles of useless tramping in the wilderness. They tried to escape in various directions, but these attempts were little better than aimless wanderings; they had always to return. Their strength gradually gave way. Wills was the first to succumb; his mind at the last appears to have wandered, for the last entry in his diary was that he was waiting, like Mr. Macawber, for something to turn up.

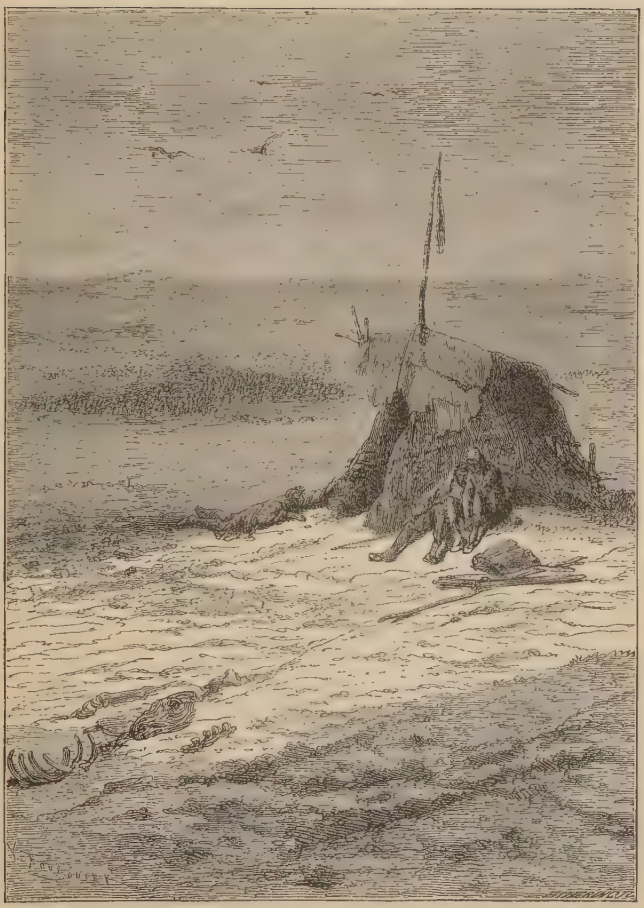
Burke died next, and King was left alone. Fortunately for him, just as he was on the point of perishing, he fell in with a tribe of blacks; and with these he was found by a relief party sent out to look for the lost explorers. The remains of

Burke and Wills were afterwards recovered and conveyed to Melbourne, where, amid the mourning of the whole colony, they were publicly interred. A monument was raised to the memory of these intrepid but unfortunate men, the first to cross the Australian continent.

While Burke and Wills were yet struggling in the wilderness, another man, M'Douall Stuart, accomplished the feat of crossing the continent from Adelaide to Van Diemen Gulf. He had made two previous attempts, the first in 1860, the second the following year, when he succeeded in getting to within two hundred and fifty miles of his destination. Nothing daunted, he again set out in 1862, and this time successfully braved the perils and hardships of the Australian wilderness.

Stuart's journey across Australia is the most important of the many that have been undertaken, for his route was that adopted for the overland telegraph. The line was commenced in 1869 in three sections, and was constructed under enormous difficulties. The magnitude of the undertaking may be realized when it is stated that for thirteen hundred miles the line had to be carried over country only before traversed by Stuart. Much of this was a sandy desert, through which the wires and poles had to be conveyed in carts. While the work was going on, a submarine cable was being laid between Singapore and Port Darwin, the northern terminus of the telegraph.

On the 2nd October 1872, congratulations flashed along the wire from the Lord Mayor of London to the Mayor of Adelaide. Telegraphic



BURKE, WILLS, AND KING IN THE AUSTRALIAN DESERT.

enterprise did not end here. Along the dreadful track followed by Eyre in 1840, on the shores of the Great Australian Bight, stretches a line of telegraph, connecting Adelaide with West Australia.

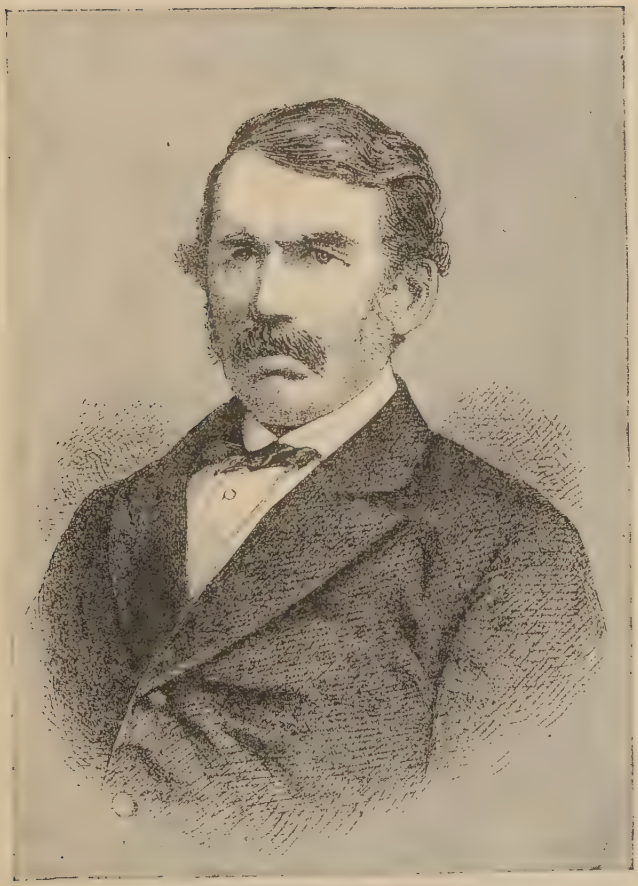
After the overland telegraph was completed, several explorers, notably Warburton in 1872, Giles in 1873, and Forrest in 1874, traversed the continent between the telegraph line and the west coast.

Nearly the whole of the great island continent has now been explored. While in many parts there are vast wastes and sandy deserts in which no life can exist, there are yet immense tracts of fertile and pastoral land, which only await the enterprising settler to turn them to account. Railways are now laid through places where early explorers struggled, and in time we may even see a line of railway from south to north, through the desert where Eyre, Sturt, and Stuart nearly perished.

DAVID LIVINGSTONE.

DAVID LIVINGSTONE was born at the busy factory town of Blantyre, near Glasgow, on the 19th March 1813. His parents were in a humble walk of life, and found it hard, with a large family, to make both ends meet; but withal they were honest, contented, and God-fearing. It was not to be expected, under the circumstances, that David's education would be an extensive one; but he received as good a grounding in the simple elements as his father's means would allow. At an early age he evinced a strong liking for books of science and travel, which, contrary to his father's wish, he persisted in reading, instead of the dry theological works set before him.

At ten years of age David entered Blantyre cotton-mills as a "piecer." Here, from six in the morning until eight at night, he was busily employed. Out of his first week's earnings he bought a Latin grammar, and Latin became his favourite study at an evening school, which he attended from eight until ten. When he got home, he read and studied until twelve, or such hour as his mother



David Livingstone

sent him to bed. He even took his book to the mill, and propped it up in a convenient place on the spinning-jenny, where he could read a sentence now and then as he passed in his work.

When at the age of nineteen, he was promoted to be a cotton spinner, and this enabled him to take a step which he had long been determined upon. He was inspired with the ambition to become a medical missionary in China, and the increased wages put the means within his reach. During the summer he saved enough money to enable him to attend the winter medical classes at Glasgow University. In due time he passed his examinations successfully, and became a licentiate of the faculty of physicians and surgeons.

Just at this period difficulties with China put a sudden stop to his purpose of proceeding thither, but he immediately turned his thoughts in another direction. His attention had been drawn to the successful work of Robert Moffat in South Africa, and there he now determined to go. He joined the London Missionary Society, and studied for two years at their training college at Chipping Ongar. When his studies were completed he sailed for South Africa, and landed at Cape Town in 1840.

Livingstone immediately proceeded to Kuruman, the farthest inland station of the society. After several excursions through Bechuanaland, to acquaint himself with the manners and customs as well as the language of the natives, he settled and founded a mission in the valley of the Mabotsa, with the tribe of the Bakwains.

Almost at the outset he nearly lost his life in

an encounter with a lion. Several lions had been preying on the flocks and herds of the natives, and Livingstone joined a party sent out to exterminate them. The lions were soon met with, and Livingstone fired at one, when immediately afterwards he heard a shout of warning from the natives. "Starting and looking half round," he says, "I saw a lion just in the act of springing upon me. He caught my shoulder as he sprang, and we both came to the ground together. Growling horribly close to my ear, he shook me as a terrier does a rat.

"The shock produced a stupor similar to that which seems to be felt by a mouse after the first shake of the cat. Turning round to relieve myself of the weight, as he had one paw on the back of my head, I saw his eyes directed to Mebalwe (a native schoolmaster), who was trying to shoot him at a distance of ten or fifteen yards. His gun, a flint one, missed fire. The lion immediately left me, and attacking Mebalwe, bit his thigh. Another man attempted to spear the lion while he was biting Mebalwe. He left Mebalwe and caught this man by the shoulder; but at that moment the bullets he had received took effect, and he fell down dead. Besides crunching the bone into splinters, he left eleven teeth wounds in my arm."

Livingstone entered upon his ministrations with earnestness, and was listened to by willing ears, Sechele, the chief of the tribe, being his first convert. He did much good temporally, and taught the natives many arts, and on several occasions was the means of preventing wars with other tribes.

In June 1849 he visited the tribes to the

LIVINGSTONE AND THE LION.

northward, and in the course of the journey discovered Lake Ngami and the upper waters of the Zambezi. In 1852 he started on another journey through southern Central Africa, through regions never before visited by white men. He crossed the Kalahari Desert to Linyanti, on the Chobe, a branch of the Zambezi, where he spent some time. He then, with a party of followers, ascended the Leeba to Lake Dilolo, and turned westwards, ultimately reaching Loando, on the west coast.

He and his followers were in a forlorn condition from fatigue and starvation, but they were treated with the greatest kindness by the Portuguese. Livingstone remained at Loando three months to recruit his health, which had suffered from the fever peculiar to the country. In this journey he made a discovery of immense value. He found that the interior of South Africa was a fertile land watered by many great rivers, and teeming with life, and not a barren waste, as had previously been supposed.

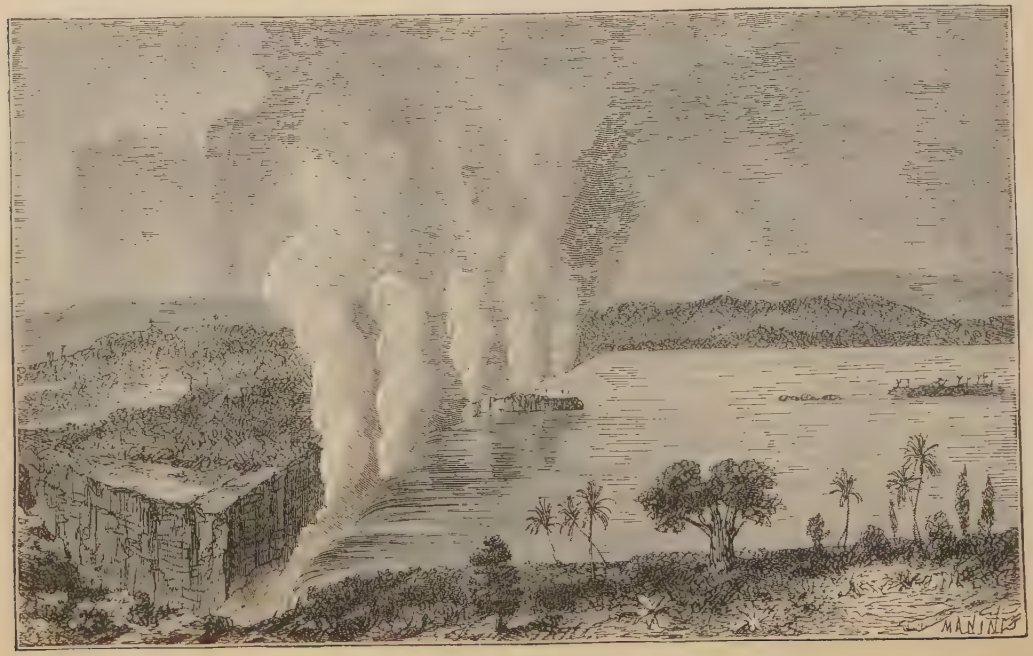
Livingstone started in September 1854 on his return to Linyanti, which he reached without any material mishap, although the journey lasted ten months. He now resolved to complete his journey across Africa by going down the Zambezi to the east coast, and set out in November 1855 with a party of his negro friends from Linyanti. Shortly after starting, in order to avoid a bend of the Zambezi, he cut across the country, but happened to make a detour in the direction of the river. Thus, entirely by chance, he made one of the grandest discoveries of the nineteenth century, the

famous Victoria Falls of the Zambezi, the largest in the world.

The scenery around the falls is extremely beautiful, and Livingstone thus describes them, as seen from an island on the verge:—"I believe that no one could see where the vast body of water went; it seemed to lose itself in the earth, the opposite lip of the fissure into which it disappeared being only eighty feet distant. At least I did not comprehend it until, creeping with awe to the verge, I peered down into a large rent which had been made from bank to bank of the broad Zambezi, and saw that a stream of a thousand yards broad leaped down a hundred feet, and then became suddenly compressed into a space of fifteen or twenty yards.

"In looking down into the fissure on the right one saw nothing but a dense, white cloud, which had two bright rainbows in it. From this cloud rushed up a great jet of vapour, exactly like steam, and it mounted two or three hundred feet high; there condensing, it changed its hue to that of dark smoke, and came back in a constant shower, which soon wetted us to the skin. On the left we saw the water at the bottom, a white rolling mass, moving away to the prolongation of the fissure which branches off near the left bank of the river."

Livingstone proceeded on his way, the only real dangers encountered being from the difficulties of the path, and from wild animals. At one place elephants and buffaloes were so numerous that the party had to shout at them to make them get out of the way. Quilimane was reached in May 1856, and Livingstone again received the greatest kind-



VICTORIA FALLS OF THE ZAMBEZI.

ness from the Portuguese. From Quilimane he embarked for England, where he arrived on the 12th December 1856, after an absence of sixteen years.

Rumours of his discoveries, and of his remarkable journey across Africa, had preceded him, and when he arrived he was received with enthusiasm. Oxford and Cambridge Universities conferred on him the degrees of D.C.L. and LL.D., and he received many other honours. To satisfy the general curiosity he was forced to write his book "Missionary Travels in South Africa;" but this task he found so irksome that he declared he would rather cross Africa again than write another book.

Livingstone wished to pursue his discoveries; but feeling that his connection with the London Missionary Society might hamper his movements, he severed his connection with it.

In his second journey to Africa, which lasted from 1858 to 1864, he principally devoted himself to exploring the Shiré River, a branch of the Zambezi, which no European had before done. He found the country beautiful and fertile, and thickly populated.

About two hundred miles from its mouth he discovered the Murchison Falls, a series of magnificent cataracts, and also Lake Shirwa, a picturesque sheet of water nearly eighty miles long. But his greatest discovery was Lake Nyassa, which he first saw on 16th September 1859, and explored fully in 1861. This great lake is three hundred miles long, and in places of enormous depth. It is subject to sudden storms, which sweep down from the surrounding mountains, and which render the navigation dangerous. Livingstone found the population

on its banks denser than in any other part of Africa he had seen, the soil being very rich and fertile.

But this pleasant picture had its dark side. The country was ravaged by the slave traders, and whole districts were laid desolate. Under Livingstone's direction the first Christian mission was planted in the Shiré country, which is now, by the benign influence of Christianity, and the care and zealous efforts of our missionaries, the most civilized part of native Africa. On his return to England Livingstone published the account of his travels in "The Zambezi and its Tributaries."

For the third time he prepared to go out to Africa, and the British Government, to give him an official standing, appointed him H.M. Consul to the tribes in the interior. His purpose was to explore the country about Lake Tanganyika, and to search for the head waters of the Nile. He landed near the mouth of the Rovuma River in March 1866, with a following of twelve young Christian Africans, twelve sepoys, and ten natives of the Johanna Islands, under a headman named Moosa.

Nothing was heard of Livingstone until October, when Moosa and his companions returned to the coast with a circumstantial story of his death at the hands of a warlike tribe in the interior. It was not until some time afterwards that this story was found to be utterly false. The rascally Moosa and his companions had become terrified at the fatigues and dangers of the journey, and had deserted, inventing the story to cover their treachery. Still, it was amid innumerable difficulties that Livingstone pursued his journey westwards.

In the course of his explorations he discovered Lakes Moero and Bangweolo, and he then retreated to Ujiji, on the eastern shore of Lake Tanganyika, where he found that a supply of stores and medicines sent thither for him had been wantonly squandered. The desertion of his followers, except a few of the native Christians, was also a source of grief and discouragement to him. Despite these misfortunes, he again plunged into the interior, and explored the head waters of the Congo.

He had now been absent nearly five years, and no authentic news had been received of him. Several attempts to send him supplies had failed, owing to the dishonesty of the carriers and the difficulties of the road. A search expedition was organized in 1872, and sent out to look for him, for his whereabouts even was unknown. But this expedition was forestalled by another which had set out the previous year, under the leadership of Mr. H. M. Stanley of the *New York Herald*. Stanley reached Ujiji in November 1871, and there found the veteran traveller almost destitute.

By this happy meeting Livingstone's necessities were relieved, and shortly afterwards supplies and medicines arrived from Zanzibar. But he refused to go home; he wished first to finish his explorations as to the source of the Nile. After Stanley left him he proceeded westwards along the northern shore of Lake Bangweolo to the Luapula River. Here he was seized with dysentery, and was forced to return. He grew gradually weaker, and at last had to be carried in a litter. He reached Ilala, beyond Lake Bangweolo, in a dying condition.

At four o'clock, on the morning of the 1st of May 1873, when his attendants entered his hut, they found him in the attitude of prayer, kneeling beside his bed, his head buried in his hands on the pillow—dead!

His body was embalmed by his attendants, who, amid almost insurmountable difficulties, and in a journey lasting nine months, brought it to Zanzibar. Amid the profound grief of his countrymen, he was at last laid to rest in Westminster Abbey on the 18th of April 1874.

Dr. Livingstone was a true hero. In all his wanderings in Africa, during a period of thirty years, he never forgot that his duty was to spread the gospel, and he never ceased to do all in his power to suppress the iniquitous slave traffic. So dreaded was he at last by the Arab slave traders, that when they heard of his approach they fled, and left their slaves behind them. Thus, on many occasions, Livingstone was the means of restoring numbers of wretched captives to liberty. Never once was he in danger of his life from the natives; his kindly nature disarmed all hostility, and many a negro tribe among whom he had sojourned showed sincere sorrow when he parted from them. He brought the dark interior of Africa to light, opened up the road for civilization, and prepared the way for the greatest blessing of all, the inestimable blessing of Christianity.

THE END.